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THE QUALITY OF THOROUGHNESS IN NURSES' WORK.

AN ADDRESS TO THE GRADUATING CLASS AT THE JOHNS HOPKINS HOSPITAL TRAINING SCHOOL FOR NURSES, MAY 28, 1903.

BY ISABEL HAMPTON ROBB, *of Cleveland, Ohio.*

A little over thirteen years ago it was my privilege to greet for the first time a Baltimore audience and to become for a few years a resident of Baltimore City. And, like all others who have once lived within her borders or who have been in any way a part of the Johns Hopkins Hospital or University, I have always been eager to seize any opportunity that might afford itself of revisiting the place that has been endeared to me by work and association. So when Dr. Hurd did me the honor to ask me to address the graduates of to-day, the pleasant anticipation of finding myself once more surrounded by Johns Hopkins nurses, past, present and future, and of being again in touch with Baltimore, was not to be withstood. I am only too well aware of the fact that the retrospect and forecast I may hold before you to-day may not contain the full measure of inspiration and wise counsel that you may have hoped for, nor delight you with the happy phrasing that might have been offered you by many others who would gladly have accepted the honor of addressing you in my place; nevertheless I feel assured that no one could be found who is more profoundly interested than myself in your individual interests and work or who could draw more closely to you in those mutual professional ties and common interests into which you are about to enter.

At that first gathering the Johns Hopkins nurse was conspicuous by her absence. She was still in the future, her place was still to be made in the hospital and household; her history page was still fair and unwritten. But two years later the first class of graduates stood, where you now stand, prepared to leave their hospital and to go forth to form a new factor in the life of this city, to become part of it for better or worse; and each year since a fresh class has been added to the first until to-day our alumnæ form a goodly host. How they have sped, we of the household, who have watched their individual lives anxiously, know full well. The Johns Hopkins nurse has not only become a familiar presence in many homes both of the needy and of the well-to-do of this city,

but to various positions in other cities and countries she has also carried the well-known name of her hospital and school, doing both, we trust, honor and credit.

For the graduate of to-day that first class must need have a special interest, for early in its formation there came into its ranks one who was destined to become, a few years later, the chief executive of your school. From probationer to junior, from grade to grade, she worked her way up until there was no form of nursing within her reach she had not done, no nursing position the hospital had to offer she had not held. Thus year by year she went on with indomitable perseverance, unconsciously training mind and hands, so that when the time came there was no need for the hospital authorities to look beyond their own graduates for a principal for their school for nurses, since they had readily to hand one who was in every way capable of assuming a position of responsibility and trust equalled by few and excelled by none open to members of your profession. And it should be a matter of no small pride and pleasure to all Johns Hopkins nurses that with the exception of the first few years they have held within their own hands the welfare of the nursing department of their own hospital, and at the same time have contributed superintendents for similar positions to other hospitals in a greater proportion for the length of years it has been in existence than perhaps any other school in the country.

But if I recall these facts as affording a sufficient proof of the standard that your school has maintained; if I tell you that the eyes of the hospital world are ever watching with keen interest the progress made by this school, and that the superintendent of your school is an authority on nursing affairs, it is not that you may be puffed up or satisfied with yourselves, but rather realize the burden of the responsibility laid upon you, and that when you have done your best you may say with all humility, "We are unprofitable servants, we have done that which it was our duty to do," and strive to make the future stand for better work than the past.

There is perhaps no other outside of Miss Nutting's immediate co-workers who can be so well aware as myself of the steady progress made by this school: while carrying on its every-day work, she has lost no opportunity for its advancement and betterment, and leaving unmentioned for the moment the many minor but important changes and improvements she has made, it is a great satisfaction to feel that she should have been among the first to inaugurate successfully the three years' course of study, with an eight hours daily system of practical work, which marks one of the greatest advances in training school methods. Her last great achievement has been the establishment of a preliminary course of instruction for probationers, the great need for which has given me a subject ready to hand—a subject that one could readily discourse upon under many and various titles, but to-day permit me to speak of it in its relation to "The Quality of Thoroughness in Nurses' Work."

That there is a deep and widespread dissatisfaction felt at the lack of thoroughness in much of the work to-day and that this deficiency is confined to no particular class of workers, and to no particular degree of service, we are all aware. Nevertheless, although few of us escape the discomfort and annoyance attending upon it in some shape or form, at one time or another, we find ourselves still able to endure it with a certain amount of patience and equanimity, so long as it partakes of the impersonal. But once let it become personal in character, once let it enter the privacy of the home, and we are keenly sensitive and alive to defects in work of any kind and give expression to our feelings and opinions in no uncertain tones. But what worker is brought into more personal and intimate relationship with those with whom she has to deal than the trained nurse? All of us have heard a portion of the public sentimentalize and idealize the nurse with such fulsome flattery that we have sometimes prayed that we might be saved from our friends. On the other hand, we hear daily criticisms upon her many short-comings, and so often are these latter sounded in the ears of the medical practitioner, whose co-worker she is, that he is impelled to look for some favorable opportunity to appease his patients by laying all sorts of injunctions upon the nurse's manners and morals and finds it when making the annual address to the graduating class. And despite the fact that these recommendations have been made, almost without exception, in the kindliest spirit, how often have we, who have had much to do with the making of nurses, been deeply embarrassed that such advice should be deemed necessary, inasmuch as we have felt that if such faults lay wholly and entirely within the guild of nurses we must in common honesty refrain from adding one more member to the list. Graduates of the Johns Hopkins have been favored beyond their kind in having in years gone-by listened in most part to addresses that were an inspiration to better deeds and higher ideals in beginning their professional career. Although you too have been besought upon one or two notable occasions to enter upon your duties in the full consciousness of guilt of such sins and frailties that if you possessed them, and had not battled against them and overcome them long before reaching graduation day, the address of warning would have availed you but little. Do not let me be misunderstood. I am not saying that nurses are perfect. What I wish to point out is that it is more than possible that the glaring imperfections of the trained nurse—and she has many—are not in the main attributable to any lack of training in her profession but are shared by her with her fellows in other walks of life and are the result of imperfect education—and here I use the word education in the broadest sense of the term. In other words inefficiency, superficiality and lack of thoroughness belong not to the graduate nurse alone but are the common property of the modern woman and belong to the average American household.

In the statement that there is a sad lack of thoroughness in the average woman of to-day, I need only refer to training-school statistics to bear me out. From one school, in twelve months 1200 letters of information are sent out and some 175 formal applications are received. Furthermore, from this number only 50 candidates are selected, and nevertheless from this restricted number of women chosen, at least 8 or

10 are dropped generally for inefficiency and lack of education. If then only 40 women, out of a total of 175 applicants, are considered worthy of admission to the school, what is the probable standard of education among the other 135? not to mention the many women who do not make formal application because refusal is certain. Surely the superintendents of training-schools are justified in feeling that the unthinking part of the public would have them "make bricks without straw."

But the fact that the qualifications of these selected few are not, and never have been, considered by superintendents of training-schools of the first order for the making of nurses is now being proved rather by deeds than by words, and this dissatisfaction has found its expression in the establishment of a preliminary course of training, which is being tried in varying degrees in schools of this country and Great Britain and which has been put on a more thorough and comprehensive basis in the Johns Hopkins than elsewhere. This extra course has been made compulsory, before a woman can begin her technical training in nursing, in the hope of overcoming to some extent a very general ignorance and helplessness in a branch of knowledge that for century upon century has been supposed to be woman's chief stronghold—that of household economics. As Miss Nutting has said, "In pursuance of the belief that it is essential for the nurses to have a wide and thorough acquaintance with the subjects of foods and dietetics and a full knowledge of the work of the household, with careful training in its various branches a comparatively large portion of time is devoted to this subject"; and in addition to this special course in Household Economics, some training-schools are even advocating and arranging for a course in general literature and in practice in reading aloud, all subjects outside of the direct work of teaching nursing. No doubt many of you might think that the above statement cannot apply to all classes of women, but as a matter of fact actual experience has amply proved that the woman of wealth, the well-to-do woman, and the college student, are equally deficient in manual dexterity so essential to good nursing, and are as ignorant of the underlying principles of household affairs as is the woman who has never had an opportunity to develop her mental powers and has labored all her days with her hands. It can be scarcely appreciated how deficient women are in the practical knowledge of the affairs of the house, until one is brought face to face with such ignorance in some such place as a training-school for nurses, where it becomes one of the fundamental requirements. As an example, I have had instructors tell me that not one woman in ten upon first entering the diet school knows how to make a cup of tea properly, few could break an egg deftly enough to separate the yolk from the white, while the qualities of accuracy, precision and a fine finish are invariably absent. The woman who would be a success as a nurse or in fact in anything, who would possess the quality of thoroughness in its fullest sense, no matter what kind of work she undertakes, needs the combined qualities of a trained mind, capable hands and body—and all must be dominated by the soul. Certainly no form of education can make for thoroughness or can fully fit for the business of life that does not recognize an equal training in this great trinity—mind, body and soul.

But when and where should a woman receive such a preparation? Surely not during a six months' preliminary course in a training-school for nurses, but rather during the sixteen years preceding the time she is of age to take up the work she intends to make the chief occupation of her life. To quote the words of another, "The hospital is the place *par excellence* to teach the art of nursing and to practise the science, but it is not the best place or even a good place to teach the accessories. Moreover, in assuming the burden of this higher education we are unwisely making ourselves responsible for all the defects and deficiencies in the training of nurses and bearing the criticism against the profession, aimed for the most part not against her nursing education but the accessories." If then this education is to begin with our childhood, where and how should it be given? Naturally in the school and at home. But as Miss Nutting has said, "Were it possible to place the requirements of admission at such a point as would insure in our pupils a definite knowledge of certain prescribed subjects before entrance to the schools of nursing, it is manifest that our work of education might be greatly facilitated." That such a course under present conditions is not practicable is only too evident. Any scheme for such preparatory instruction should include, first a thorough practical training in the care of the household and a knowledge of the properties of foods. Now at present there exists no school of instruction where a candidate could go to prepare herself fitly in these subjects for entrance to the hospital school for nursing. To be sure the Drexel Institute in Philadelphia, the Pratt Institute in Brooklyn, the School of Housekeeping in Boston and some others, cover the ground of the domestic sciences admirably, and upon them we draw for our instructors in these branches. But the instruction in these institutions is largely occupied with the subject of foods and cookery, important essentials indeed, but which do not include all that is meant when we say that a pupil should have a knowledge of housekeeping before entering the hospital wards for her training as a nurse. Unfortunately this practical handling of the things and affairs of the home is taught in no schools and in but few homes at the present day," and, as Spencer has said, "That which our school course leaves almost entirely out, we thus find to be that which most nearly concerns the business of life."

The subject of the home in relation to the question of a three-fold education has of late years been well studied by well qualified investigators who have pointed out clearly and emphatically the shortcomings of the present day in this connection and have sought for and recommended various remedies through the application of which we may hope to arrive at a better state of affairs; but up to the present time the ground has hardly been broken and no great general advance has been made. Specialized efforts, such as these preliminary courses for student nurses, have already accomplished something directly and indirectly and are doing an im-

mense amount of good, inasmuch as they have emphasized the necessity for similar education in all forms of work.

Thoroughness in any form of education must have its roots deep laid in the home, and we women have much to do with it there, and are answerable in a great measure for the present inefficiency, ignorance, indifference and waste. For the souls of the little children are ours to begin with, "Marvellous delicate and tender things," says Olive Schriner, "and keep forever the shadow that first falls upon them, that is the mother's or at best a woman's." The world requires not more children, but a better quality, not the waste products of human life that so many are to-day. But at the present there seems to be but little hope for that ideal education for the child in whom lies the world's welfare, for the home is one of the few institutions left that still keep the drawbridge up and refuse to let progress and improvement enter within their gates. The individual still regards his home as his castle, in its most conservative sense, and still clings to old traditions, old systems and time-honored cookbooks, and refuses to come into line and be guided by association and combination, by economic laws and principles, and by the specialization of labor in its true sense which makes for thoroughness as no other way can.

But women cannot be held entirely responsible for the increasing difficult conditions in the household, and for the wholesale lack of thoroughness within and without. Progress in many forms has taken out of it a great variety of work that was once done in the household by women and the time formerly spent in these various duties has not been fully accounted for in other forms of activities. How long will it still be assumed about housekeepers, as it formerly was about nurses, that they are born and not made and that the only essential required is to be a woman; that a taste and knowledge for all things domestic is hers by divine right, that she intuitively knows all about the care and bringing up of children, the laws of health, hygiene, sanitation, foods and their preparation, suitable clothing and furnishings. And yet such a groundless assumption leaves her at the mercy of two very unstable teachers, Instinct and Experience, the former sometimes lacking, and the latter at all times to be acquired at a great cost. So at the present moment we have the spectacle of each household trying to be a training-school unto itself in domestic affairs, wasting the time of both mistress and maid in vainly trying to teach and to do things without any adequate knowledge of underlying principles, busy making patients for the doctor and nurse by jeopardizing the health of families by their woeful ignorance, and later themselves falling by the wayside a prey to worry and worn-out nerves.

Nor are these the least of the woes that befall the modern household through its want of proper organization, its old-time methods and its modern dangers. The rapid accumulation of great wealth and its consequent tendency to luxurious forms of living and ease have brought us very near to that point in the order of social change when a large class of women are in danger of becoming useless supernumeraries without an excuse for existing and a menace to the nation. The average man of the day devotes his energies early and late in the making of money, economizing labor at all points to compass his purpose, only to end in pouring his wealth into the hands of a wife or children who expend it in such profusion and lavishness of ignorance, as has made Americans stand for greater extravagance than perhaps any other civilized people.

Even a superficial consideration of the question then will readily show that the inefficiency of the trained nurse can justly be placed only where it belongs—in the lack of proper early education; and while the preliminary course of instruction for other reasons is excellent and will probably always exist, it is to be hoped that it will not always be necessary to devote so large a portion of the time to Household Economics. Any adequate remedy for the present state of affairs can only come through a true education of our women. They must be trained, disciplined to bear their due share of the work needful for the helping of the nation; they must be taught that the true value of money lies not in the luxury it may heap about them, but in the opportunities it affords, and that the true joy of living can only be found in congenial work. It would be well if all appreciated the fact that the existing or faulty order must inevitably continue until our women of wealth, refinement and intellectual attainments combine their talents, leisure and intelligence to bring the home into its proper place in the economic and scientific world by the readjustment of household work and by creating the desire and the demand that our sons and daughters, children of all ranks and grades, should be given a proper education; that from the beginning there shall go hand in hand the teaching of their numberless faculties that shall make for a practical and proper appreciation of the principles of art, education and labor and the joy to be found in each. For then and then only can they understand what life means and know how to live. Moreover, the preparation must be such an one as shall be a fitting preliminary training for their future occupation in life, whether it be that of the trained nurse, the physician, the housekeeper, statesman, artist or artisan; each one whether man or woman, being prepared to fill their chosen niche, happy in having found it and not, as now too often happens, being forced into occupations for which they often have neither the heart, head nor hand.

Upon both men and women are we dependent for the first steps that shall establish and thoroughly equip professional schools for the investigation of all subjects pertaining to the household, and that shall offer suitable inducements only to such persons as have the proper attainments for carrying on such studies, after which we may look for the establishment of technical schools for children, embracing all branches of work that in any manner touch the home. These schools should cover the country like a net-work, as do the public schools, and should co-operate with them; they too should have the authority of the law behind them for which the rank and the file of the people have due respect. In such schools should the trained nurse find her proper place. With her more intimate knowledge of disease and its causes and the

dangers that menace health, she is well fitted to be the teacher of home sanitation, hygiene, the personal laws of health, the true meaning of cleanliness and the prevention of disease. Despite the fact that bacteriologists are every day throwing more light upon the causes of disease, and each city is equipped with its health officer, hospitals are still being multiplied in the land, the supply of trained nurses is not equal to the demand, and our wards are just as full of typhoid fever patients as of yore. These facts must sometimes make us pause to question if we are not spending our labor and strength for that which profiteth not. But thus it must be until the public at large and as individuals have acquired a practical intelligent appreciation of the above subjects and of the duties of individuals and communities in the prevention of disease.

We need two orders of trained nurses, the new order of the co-operating health nurse with the old order for the sick, who must ever be with us. The appointment of a staff of trained nurses to the schools of New York by the Health Commission for the purpose of continuing the work in the public schools is the beginning of this new order, and is a hopeful sign of the times.

Graduates of to-day, we who are already of the guild greet you heartily and give you cordial welcome to your place among us. In your future work we see much of hope and promise. When you have grown a little older and have had a more varied experience, you will realize that the mere care of the patient is the least part of your work compared with what you can and ought to do towards making the conditions that cause pain and sickness and all manner of suffering less possible.

In the last issue of *The American Journal of Nursing*, Miss Dock says: "After one has worked for a time in healing wounds which should never have been inflicted, tending illness which should never have developed, sending patients to hospitals who need not have gone if their homes were habitable, bringing charitable aid to persons who would not have needed charity if health had not been ruined by unwholesome conditions, one loses heart and longs for preventive work, constructive work—something that will make it less easy for so many illnesses and accidents to occur, that will help to bring better homes and workshops, better conditions of life and labor." And this expressed longing finds its echo in the heart of each of us who have learned by experience that the faithful nursing of the patient, the splendid work done in so many forms of philanthropy and the efforts of religion do not reach the root of the matter. In your professional life you have learned that we may dress and nurse a wound ever so carefully, but that all your work represents time and energy expended in vain, that a breakdown of the wound is inevitable, did not the surgeon first clean and scrape away all the diseased tissues, reaching deep down into the fresh healthy part until no germ of disease was left to impair the growth of new, healthy flesh. And so it is with our work in caring for humanity in other ways—we are but staying a worse condition perhaps, but not removing the cause if we rest satisfied with mere treatment and do not direct our best energies towards prevention.

You are, therefore, to be congratulated in your choice of work, you are entering a field of labor that is ever widening and where each can make for herself a definite place in rendering such ideals of education, as I have but haltingly tried to show you to-day, practical facts. More especially are you to be congratulated in your choice of a school where the standard of excellence desired for its graduates is so clearly set forth, and where there is placed within the reach of pupils the possibility of that quality of thoroughness that is the great need and demand of the day.

THE ANATOMY OF THE PANCREAS.*

BY EUGENE L. OPIE, M. D.,

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In the brief time at my disposal I will review a few facts which have an important bearing upon the physiology and the pathology of the pancreas and will emphasize especially those which as yet have attracted little attention. The pancreas performing a variety of diverse functions is more complex in structure than the other glandular organs which it closely resembles. Pathological alterations have given importance to many anatomical details previously regarded as insignificant.

The earlier anatomists, among them Galen and Vesalius, gave, it seems, little thought to the organ, believing that it acted as a cushion to support and protect the adjacent structures, and it was not until the middle of the seventeenth century that the duct of the gland was discovered by Wirsung, who thus made possible a proper interpretation of its physiology. The organ has since been regarded as a type of secreting gland and to its study we owe many of the facts that have served to explain the process of secretion in general. The so-called salivary gland of the abdomen resembles the salivary glands of the mouth, but the peculiarities which characterize it have been known only since Langerhans in 1869 published

* Read before the Congress of American Physicians and Surgeons, May 12, 1903.

his dissertation describing its minute anatomy. Yet until the last few years the histological structures which bear his name have attracted so little attention that their significance has remained obscure.

Few organs are subject to greater variation than the pancreas, and of these variations particularly I wish to speak. Santorini and subsequent anatomists have shown that it is provided with an accessory duct which, in some cases, can act as an outlet for the pancreatic juice, should the larger duct be occluded. In different vertebrate species and even among members of the same species the ducts of the pancreas vary greatly, and until recently it has been believed that the embryonic origin of the organ is subject to equal irregularity, but evidence that is still accumulating has shown that development follows a plan which is common to all species of vertebrates.

The organ makes its appearance as an outgrowth or bud upon the dorsal aspect of the intestinal canal at a point between the hepatic duct which has already appeared and what will subsequently become the stomach. A little later two additional embryonic buds develop at either side of the hepatic duct upon the ventral aspect of what is now the duodenum. The subsequent history of these rudimentary structures varies in different species. In man one of the two ventral outgrowths disappears, fusing, perhaps, with the other, so that the adult gland is formed by the union of a ventral part in contact with the bile duct and a dorsal part which forms the greater mass of the organ.

In accordance with this plan of development the gland is in most cases provided with two ducts of which the larger, the duct of Wirsung, enters the intestine in company with the common bile duct. The smaller accessory duct, the duct of Santorini, terminates in a papilla situated nearer the stomach than that of the larger duct. I hope I will not seem to cite unnecessarily well-known facts, if I recall the usual relation which exists between these two ducts. The duodenal orifice of the accessory duct is very minute; receiving branches from all sides, the duct increases in size and finally joins the duct of Wirsung, into which during life it doubtless pours its contents. Variations from this normal or usual type have been frequently noted. In many instances the two ducts fail to anastomose; at times that which is nearer the stomach, namely, the duct of Santorini, is larger than the duct of Wirsung; often the duodenal orifice of the accessory duct is obliterated, while occasionally one or other duct has not been found. More surprising, in view of the embryological relations already described, is the claim that the bile duct occasionally enters the duodenum in company with the duct of Santorini, while the duct of Wirsung enters the intestine at a point more distant from the stomach. In such case the dorsal embryonic bud, in which originates the duct of Santorini, could not have arisen from the duodenum at a point between the hepatic duct and what will become the stomach.

Are the variations to which the pancreatic ducts are subject in the adult explicable upon the supposition that the pancreas develops from three original buds which bear a constant relation to the bile duct? Of more practical interest is the functional significance of the two ducts and their relation to lesions of the liver and pancreas. In order to obtain data more accurate than those at present available, I have dissected the ducts after injection in one hundred subjects. The results of this examination, differing in some important particulars from those previously obtained, will be, I hope, of some interest.

Though the ducts varied considerably, there was no departure from the embryological type already described. Two ducts were present in every instance, but occasionally one or the other was so small that it was found with difficulty. The common bile duct always joined the duct of Wirsung, while the duct of Santorini, unaccompanied, entered the intestine at a level nearer the pylorus. In ten of one hundred instances the two ducts failed to anastomose within the gland, and in four additional subjects the two ducts were united by such a minute twig that they might be regarded as independent of one another. In twenty instances the duodenal end of the duct of Santorini was not patent. These figures show that in at least a third of all individuals the duct of Santorini cannot act as an accessory outlet when the duct of Wirsung is occluded. Moreover, in a considerable number of specimens the orifice of the duct of Santorini, though patent, was so minute that its functional significance was slight, the accessory duct being functionally a branch of the larger channel. In eleven of one hundred specimens the duct of Santorini, on the contrary, was equal in size or larger than the duct of Wirsung, so that during life it was doubtless the outlet for a considerable, if not the larger part, of the pancreatic juice.

Since cholelithiasis and other changes in the biliary passages are frequently the cause of lesions of the pancreas, the relationship of the pancreatic duct to the common bile duct has assumed increased importance. The two ducts usually unite to form a short common channel, the diverticulum of Vater, which is subject to almost as much variation as the pancreatic ducts themselves. I have examined the orifice of the two ducts in one hundred specimens. In eleven instances no diverticulum was present and the two ducts entered the duodenum separately at the summit of the bile papilla. In the remaining cases the diverticulum varied in length from less than one to eleven millimeters, while in only thirty specimens did this measurement equal or exceed five millimeters. The duodenal orifice of the diverticulum of Vater had an average diameter of two and a half millimeters. The figures are cited to show that unless a calculus, which has become impacted within the orifice, be of very small size, it will completely fill the diverticulum and occlude both ducts that enter.

The pancreas consists of a duodenal part, the head, and a narrower body which constitutes the greater part of the organ and is not definable from the splenic extremity, designated the tail. This classical description should, I think, be somewhat altered, for the head, I find, consists of two well-defined lobes corresponding to the two ducts of the gland. The anterior and lower part of the head is tributary to the duct of San-

torini and consists of lobules grouped about the duct and its branches. A second lobe is formed by a smaller mass of parenchyma disposed about the duct of Wirsung as it passes through the head of the gland, and is situated behind the larger lobe. In the specimens which I have examined a cleft filled by loose areolar tissue separates the two lobes and is demonstrated most readily after the gland has been placed in a hardening fluid. The adjacent lobular surfaces, when exposed, are as smooth and well-defined as the external surface of the gland. This interlobular cleft, in contact with the duodenum, lies midway between the two pancreatic ducts and its depth depends upon the distance from the duodenum at which the ducts anastomose.

Recent observations have disclosed a fact which, seemingly of little importance, serves to explain the occurrence of certain abnormalities of the gland. Within the papilla of the duct of Santorini, Helly has found in many individuals lobules of pancreatic parenchyma situated immediately below the duodenal mucosa. Occasionally provided with an independent duct which enters the duodenum near the orifice of the duct of Santorini, they constitute a true accessory pancreas. Studying the papilla in the embryo, Helly found that this pancreatic tissue originates at a very early period of development from lateral branches which bud from the duct as it passes through the mesoblastic layers of the intestinal wall.

This process, I believe, explains the occurrence of small masses of aberrant pancreatic tissue embedded in the wall of the stomach or of the intestine, at a variable distance from the pancreas. Such aberrant glands are by no means so rare as has been supposed. I have collected from the literature only twenty-two examples, but in eighteen hundred autopsies performed in the Pathological Laboratory of the Johns Hopkins Hospital this anomaly has been observed in ten cases. Nodules of pancreatic tissue one or two centimeters across have occupied the submucosa or muscularis of the stomach, duodenum or jejunum. In seven cases the accessory gland was situated above the pancreas in the wall of the stomach or of the duodenum, and in three cases below the pancreas in the duodenum or in the jejunum. Of some importance, as will be shown, is the fact that in two instances two accessory glands occurred in the same individual.

The earlier writers, notably Zenker, assumed that an aberrant gland arose from an accessory embryonic outgrowth or bud from the intestinal canal. The constancy with which the pancreas of all vertebrates develops from three definitely situated duodenal outgrowths has, however, made it improbable that in man such a fundamental process is subject to variation. At the same time, this multiple origin has suggested that one of the embryonic structures which normally disappears may persist as an accessory pancreas.

In one case from the literature and in two of my cases two aberrant masses of pancreatic tissue were situated either above the pancreas, as in my cases, or below the pancreas, as in the case of Zenker. The existence of more than one accessory gland cannot be explained by the persistence of one or more embryonic structures, for in my cases the pancreas itself had undergone normal development and was provided with two ducts. A more probable explanation is the following: At a very early period of embryonic life a lateral branch of the pancreatic duct entangled in the mesoblastic layers of the intestinal wall is, by longitudinal growth of the intestine, carried a variable distance from the pancreas and a new duct is formed in much the same way that the pancreatic duct regenerates after section. In confirmation of this hypothesis I have found pancreatic tissue in the papilla of the duct of Santorini in two cases—the only ones examined—in which aberrant glands were found in the wall of the stomach, and in one case in which an aberrant gland was situated in the jejunum, that is, below the pancreas, lobules of pancreatic tissue were found within the bile papilla about the duct of Wirsung as it entered the intestine. Here pancreatic tissue has been rarely, if ever, found.

Histology of the Pancreas.—The larger ducts of the pancreas are lined by high columnar epithelium. The cells which form the smaller ducts become lower and finally flat as the secreting acini are approached. The acini are composed of large cells containing zymogen granules which, as Heidenhain has shown, present characteristic variation during different stages of secretion. Within the lumen of each acinus Langerhans found cells which resemble those of the terminal ducts and represent, as it were, an invagination of the duct into the lumen of the acinus. The nature and the significance of these centro-acinar cells is not known. Of greater importance are the structures to which their discoverer's name has been given, the so-called islands of Langerhans.

Scattered amongst the secreting acini, several times the size of a single acinus, they are round or oval bodies composed of polygonal cells grouped together to form short, tortuous columns, which unite with one another in such a way that space is left for a network of wide capillary blood-vessels. If the blood-vessels of the pancreas are injected, glomeruli of tortuous dilated capillaries represent the capillary vessels of the interacinar islands, and though they have a superficial resemblance to the glomeruli of the kidneys, unlike the latter, they freely communicate by numerous anastomoses with the capillary network of the surrounding tissue.

The interacinar islands have been found in many species of mammals, birds and amphibia. For a time it was claimed that certain species did not possess them, but extended comparative studies have demonstrated the occurrence of analogous structures in all higher vertebrates and in a constantly increasing number of reptiles and fish.

The embryological studies of Laguesse and others have shown that the cells which form the islands of Langerhans have a common origin with those of the secreting acini, and

in the syphilitic pancreas of the fœtus I have found that the columns of the island as a result of retarded development are continuous with the small ducts of the gland. When, however, the organ has completed its development the islands are wholly independent of the secreting elements and it is not possible to trace a communication between the ducts of the gland and the interacinar islands.

The islands of Langerhans consist of columns of cells in intimate relation to a rich vascular supply and, having no communication with the pancreatic ducts, resemble in structure certain ductless glands, the parathyroid bodies and the adrenal glands and somewhat less closely the thyroid glands. Common to all vertebrate species, they doubtless have some important function. Independent of the secreting elements of the gland, they are not concerned in the elaboration of the pancreatic ferments. The relation of their cells to a rich vascular supply suggests that their action is through the medium of the blood. Abundant evidence in accord with these facts has shown, I believe, that the islands of Langerhans exert that influence upon carbohydrate metabolism which was formerly attributed to the pancreas as a whole.

In the human pancreas as in the human liver the lobules of the gland are not sharply defined, but in certain lower animals they are more clearly outlined by septa of connective tissue. In the pancreas as in many other organs the smallest lobule constitutes a unit of structure which repeats itself throughout the parenchyma. In the pancreas of the cat, for example, such a lobule outlined by connective tissue consists of a group of acini drained by a single duct; in some parts of the gland every lobule contains near its center an island of Langerhans. From the small arteries and veins which lie in the periphery of the lobule capillary vessels penetrate between the acini; several wide capillaries supply the rich vascular network of the island of Langerhans.

In man the individual lobules are often so fused together that their outlines are not discernible, but in general the same plan of structure exists. Of some importance is the fact that islands of Langerhans are not equally abundant in all parts of the gland. Actual count demonstrates that they are about three and a half times more numerous in the splenic extremity of the gland than elsewhere. In the pancreas from different individuals, moreover, the number varies considerably, and it is possible that in some instances as the result of a congenital defect the interacinar islands are too few to exert a normal influence on carbohydrate metabolism. In the pancreas of a child who died with diabetes the number of islands of Langerhans was almost a third of that usually present; the disease in this case was hereditary and affected six members of the same family. It suggests the possibility that diabetes may occasionally be the result of a congenital anatomical defect in the gland. The evidence in favor of such an hypothesis is at present inconclusive.

In conclusion, I may say, that two anatomical peculiarities of the pancreas, I believe, have not as yet received the attention they deserve from the physiologist, the pathologist, and the clinician. In the first place, the organ consists of two functionally diverse elements,—on the one hand cells which supply to the intestine important digestive ferments, and on the other hand, cells having no communication with the ducts of the gland but in intimate relation to the blood-vessels. In the second place, the close anatomical relation of the pancreatic duct to the common bile duct favors the transmission of morbid processes from the liver and bile passages to the pancreas.

UNCINARIASIS. REPORT OF A CASE OF INFECTION WITH THE AMERICAN SPECIES.

By Thomas R. Boggs, M. D.,

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The recently published discovery by Stiles of an American species of Uncinaria has aroused much interest, and it would therefore seem worth while to present in some detail before the Society the first case observed in the Johns Hopkins Hospital.

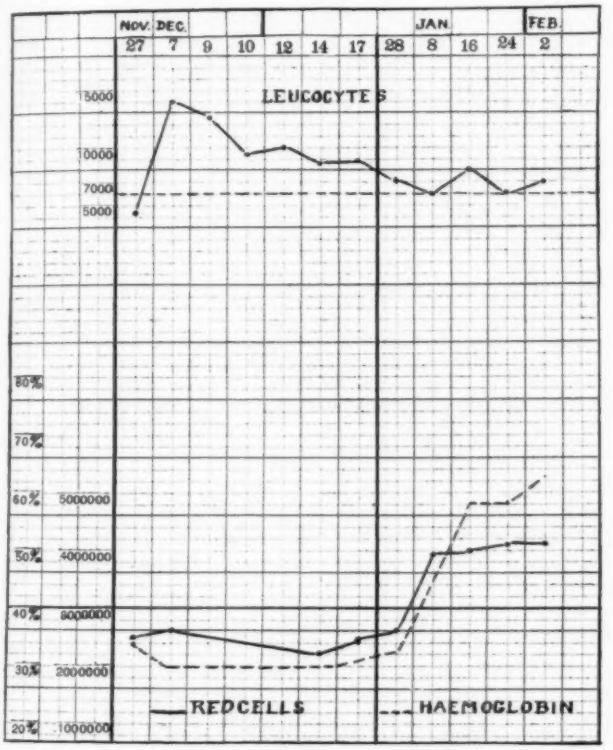
The patient, a white man aged 22, was admitted to Dr. Osler's service, November 26, 1902. A native of eastern North Carolina, he worked as a farm hand and taught school. He complained of "anæmia" and general weakness.

Family History.—This was unimportant except that a brother aged 25, died 3 years ago of "pernicious anæmia," having exhibited symptoms much like those of patient.

Personal History.—He has never been robust. There was no history of malarial fever, nor of severe illness until the present trouble. He had been subject, to "spells of weakness" for several years past. These he attributed to the excessive use of snuff. No special symptoms referable to circulatory or respiratory tracts other than shortness of breath on exertion, had been present. His appetite and digestion were fair, although he had occasional attacks of nausea and vomiting. There was no history of dysentery or diarrhœa until the present illness. He had never observed blood in his stools. He had never been jaundiced, nor had attacks of abdominal pain. He had always been rather sallow, though never so pale as now. There was

no history of venereal infection. He had used snuff, by rubbing on the gums, for more than five years, often to excess. He used alcohol moderately. He had worked until the present illness and had studied and taught school during part of each winter. He had always lived in North Carolina, and had never been in any seaport nor associated with foreigners. His average weight was 140 pounds.

Present Illness.—The patient had a severe attack of measles in March, 1902, and has never recovered his former strength. He worked most of the summer, although he felt unwell. About October 1st he began to have indiges-



BLOOD CHART.

tion, some headache, occasionally dimness of vision, and irregular diarrhœa. He did not see any blood in the stools. There was also some "cold" with cough and pain in the back. The indigestion and diarrhœa continued irregularly, the stools were never more than four a day. There was steadily increasing weakness and pallor. No swelling of the legs was noticed.

Physical Examination.—Patient has evidently lost flesh. The skin is pale and has a slight yellow tint. The mucous membranes are pale but nowhere pigmented. No special pigmentation was visible over surface of body. The teeth are sound. The pupils are moderately dilated, equal and react well to light and during accommodation. The sclerotics have a faint yellow tinge.

Thorax is well formed—expansion fair and equal. Vocal fremitus is good and equal. The lungs seem clear on percussion and auscultation. There is marked myoidema.

Heart.—The maximum impulse is in the fourth interspace, i. e., 8 cm. from the mid line. There is no increase in area of cardiac dulness. A soft blowing systolic murmur is heard at the apex, becoming more intense along the left sternal border and reaching a maximum in second left interspace. The pulse is 92, small, soft, regular, no marked thickening of vessel walls.

The abdomen is not distended, respiratory movements well marked, no rose spots, or visible peristalsis. The walls are everywhere soft, no tenderness. The liver dulness begins at the 6th rib and extends 8 cm. in right nipple line. The spleen is just felt. There is no general glandular enlargement.

Blood Count.—R. b. c. 2,742,000; hb. 37%; w. b. c. 5500.

A specimen of feces obtained and examined during the visit showed eggs of *Uncinaria* in very considerable abundance. They were mostly in well advanced segmentation.

December 3d.—The patient's general condition is unchanged, he complains of shortness of breath. Eggs of *Uncinaria* are plentiful in stools but no worms have been passed.

To-day thymol was given, 4 grams in two doses at intervals of two hours, followed after four hours by 30 grams of castor oil. The first stool after the purge was lost, but in remaining stools for the 24 hours a small number (12) adult worms were found. These showed on examination absence of ventral hooks and the presence of a large median dorsal tooth in the buccal cavity. The copulatory bursa of the male worms was characterized by a dorsal ray divided to its base, the two branches having a bifid tip. These anatomical points clearly marked the species as *Uncinaria Americana* (Stiles 1902), and the diagnosis was confirmed by Dr. Stiles, who kindly examined the specimens.

December 7th.—The patient's temperature has remained elevated with remissions since he came to the hospital. To-day he complained of pain and tenderness of whole left leg most marked about Poupart's ligament. On examination there is definite swelling in the left groin and throughout the whole leg, with marked increase of local temperature and great tenderness all down the inner side of thigh. No redness is observed. The foot is warm and there is no discoloration. Pulsation seems slightly less in left femoral and anterior tibial arteries.

December 8th.—The left leg is more swollen and very painful. A rectal tube was passed and numerous segmenting ova found in the feces.

December 10th.—The general condition of patient is fairly good, the leg still very much swollen, but no longer painful. Ova are still plentiful in stools. The patient was given a second dosage of thymol, 4 grams, followed by castor oil as before. The stools were carefully saved and examined. Twenty-four adult worms were expelled, 21 females, 3 males.

December 11th.—The patient complained last night of

pain in lower right axilla, where suppressed breathing and a dry friction rub were made out. No tubular breathing was heard. The whole left leg is still much swollen. The sputum is negative on examination for B. tuberculosis.

December 13th.—Lungs seem clear on examination.

December 14th.—Careful ophthalmoscopic examination showed the eye grounds practically normal. Eggs of *Uncinaria* are still numerous in stools. The patient was ordered thymol, 5 grains every 4 hours, for 48 hours.

December 18th.—The patient is much improved in general condition. His temperature is normal. Eggs of *Uncinaria* are still readily found in stools. The thrombosis of the left leg is subsiding.

January 5th.—Prof. Osler notes: "There is still slight fulness on the inner side of the left upper thigh and a distinct cord palpable to the inner side of left femoral artery."

The patient continues slowly to improve as shown by his general condition and blood counts (see charts). The ova persisting in the stools, thymol was given as before described on January 4th, 7th, 11th, 18th, 26th, 30th. On four days whiskey 30 cc. was given with the thymol, as some authorities insist that the drug acts more powerfully in the presence of alcohol. We were unable to detect any increased activity however in this case.

On February 1st and 4th, male fern was administered after fasting and followed by a purge, and at present writing, some days later, a few eggs may still be found in stools. The thrombosis in left leg has almost entirely disappeared and gives no trouble, and the patient has gained in weight and strength and seems normally intelligent as contrasted with his former apathy. The patient was discharged well on February 15th. No eggs had been found in the stools for nearly ten days.

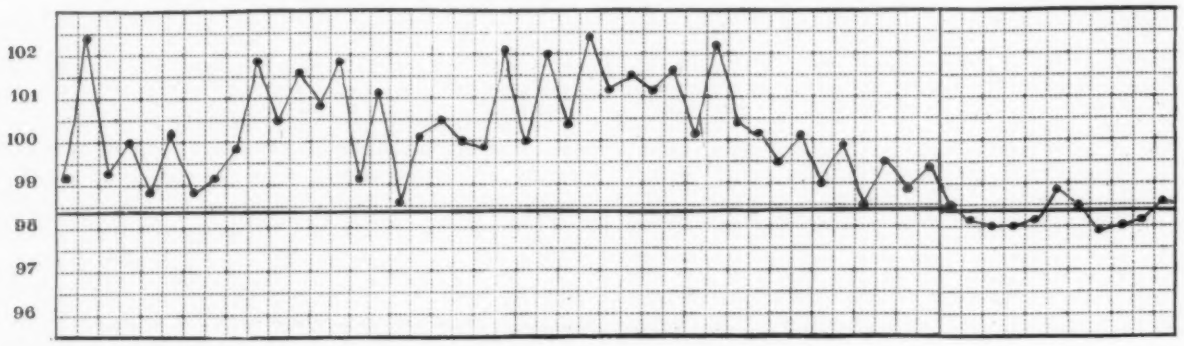
The principal points of interest in this case are its close resemblance to the Egyptian and European cases as described by Sandwith, Leichtenstern and others. It is also a comparatively recent infection in an adult and so opposed to the great predominence in children as shown by Stiles, Harris and other recent American reports.

The occurrence of general symptoms of intoxication is noted by most writers on the eastern species. Sandwith notes fever in 68 per cent at some stage, usually at the onset of the worst symptoms. Ashford also noted fever in his Porto Rican cases. Eosinophilia is noted by most writers who have made differential counts.

Ashford's cases averaged 10.1 per cent. Leucocytosis is absent except in complications; this is well shown by the counts before and after the thrombosis in this case. While subjective symptoms of dimness of vision and giddiness are noted, the ophthalmoscopic findings are usually negative.

The difference in the proportions of hæmoglobin to the red cells in Uncinariasis and in chronic paludism found in the same or nearby localities is fully discussed by Giles, Rogers and others for the Old World species, but so far no statistics have been compiled in this country.

It is most interesting to note the extreme resistance of the worms to any and all drugs in some cases. The great mass of opinion and experience confirms thymol as the best of all for this worm, and it must be administered repeatedly at intervals of 4 to 10 days until the eggs no longer are found in the stools. Sandwith in his exhaustive report shows rather strong proof that the administration of alcohol with the thymol renders it more toxic to the patient. In the literature accessible to me I have been unable to find any case of thrombosis reported as a complication, although it might reasonably be expected with the extreme anæmia so frequently noted. Several of the European authors mention pulmonary complications.



TEMPERATURE CHART.

At the suggestion of Dr. John L. Yates, of the University of Pennsylvania, an attempt was made to test for the presence of hæmolysins and eosinophilic chemotaxis in the emulsion of the worms. But the very small quantity of material available at any one time, and its more or less imperfect preservation renders the negative results entirely inconclusive.

In closing I wish to thank Dr. Briggs for much assistance in furnishing me the data of the case in the latter part of its course.

The differential counts of the leucocytes are as follows:

DIFFERENTIAL COUNTS. 500 LEUCOCYTES COUNTED.

DATE	Nov. 27 %	Dec. 16 %	Jan. 8 %	Jan. 16 %	Jan. 24 %
Polymorphonuclear neutrophiles	51.8	*75.4	53.24	56.57	62.8
Small mononuclear.	26.4	10.4	27.37	31.2	26.0
Large mononuclear Transitional	15.4	8.2	6.08	5.26	5.4
Eosinophiles	4.6	5.6	°12.92	6.90	5.4
Mastzellen	1.8	0	0.20	0.30	0.4
Normoblasts seen in count of 500 leucocytes	0	0	10	10	0

*Count made during the leucocytosis accompanying thrombosis.
°Count made the day after a course of Thymol; the Eosinophilia is strikingly higher than at any other period.

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SOLITARY TUBERCLE OF THE STOMACH.

BY ROY MCL. VAN WART, M. D.,

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(From the Pathological Laboratory of the Johns Hopkins University and Hospital).

The following case of a hitherto undescribed form of tuberculosis of the stomach was found at autopsy:

Clinical History.—L. B., female, negro, age 88, was admitted to the medical ward of the Bay View Asylum on Jan. 15, 1903. No family or personal history could be obtained. The patient was much emaciated, unable to stand from extreme weakness and refused to answer questions. Her appetite was poor and she refused all except liquid food. Physical examination showed the presence of the cardiac and pulmonary lesions found at autopsy. The urine, sp. gr. 1018, was acid and contained a few hyaline and granular casts. She continued in much the same condition until Jan. 20, when the physical signs of a bronchopneumonia became evident in the right lung, and she died, 9 A. M., Jan. 23.

Autopsy.—1.30 P. M., Jan. 23. The body was that of a much emaciated negro female. Rigor mortis was present. There was no lividity. There was onychogryphosis of all the toes of both feet. There were a few slight ecchymoses over the right knee joint. The subcutaneous fat was practically wanting. The abdominal muscles were very thin and of a pale reddish-yellow color. The great omentum was firmly adherent to the anterior abdominal wall and to the underlying small intestines. The coils of small intestine were matted together and adherent to the Fallopian tubes, ovaries and uterus. The latter were firmly bound down to the rectum and posterior wall of the pelvis. The stomach was slightly adherent to the liver near the pylorus. The appendix, 7 cm. long, was free from adhesions, possessed a mesentery and contained three small fæcal concretions. All the adhesions were old and formed of firm fibrous tissue. The liver reached 11 cm. below the xiphoid. The diaphragm reached the 5th space on the right side and the 4th rib on the left side.

On opening the thorax, the lungs were found to overlap the pericardium. The left lung was adherent at the apex posteriorly and to the diaphragm by firm fibrous adhesions. The right lung was adherent throughout by similar adhesions. The pericardium was adherent to the heart throughout, completely obliterating the pericardial cavity. The adhesions were fibroid and so firm that the pericardium could not be separated from the heart. The heart was large, rather soft, and showed old warty vegetations on the pulmonary and mitral valves. The aortic valve showed arterio-sclerotic changes. The heart muscle showed fibroid patches. The coronary arteries and base of the aorta showed sclerotic changes.

The left lung was rather voluminous and crepitant throughout. It showed dilated alveoli along the anterior margin. The surface was deeply pigmented, irregular from scattered areas of emphysema, and smooth except over the adherent areas. No nodules could be felt in the lung and there was no scar at the apex. On section the lung showed a considerable increase in fluid. The right lung was rather large and its anterior edge was adherent to the pericardium. The appearance, except for the presence of some firm nodules in the lower lobe was similar to the left lung. On section the lung was of a deep red color. The upper lobes exuded a large quantity of frothy fluid. The lower showed a number of raised slightly yellowish areas; evidently patches of bronchopneumonia. There was no scar at the apex and none in the other parts of the lung. The bronchi contained a thick purulent fluid and the mucosa was injected. The bronchial and tracheal glands were firm, deeply pigmented, not markedly enlarged and on section revealed no evidences of caseation.

The spleen, liver and kidneys, while pathologically interesting, showed nothing bearing on the case. The gall bladder contained

a large number of small reddish-black calculi. The gall ducts were patent. The pancreas and adrenals were normal. The bladder and ureters were normal. The uterus was small and atrophic and contained a small fibro-myoma. The ovaries and Fallopian tubes showed nothing bearing on the case. The vagina was normal. The retroperitoneal and mesenteric lymph glands were normal. The intestines were normal.

The stomach was small and somewhat vertically situated, the pylorus lying just to the left of the middle line opposite the fourth lumbar vertebra. The surface was smooth except at a point 6 cm. from the cardiac orifice, along the greater curvature, where an area of thickening of the peritoneum was seen. Corresponding to this a tumor could be felt lying in the stomach and occupying the greater part of its lumen. The tumor was semi-fluctuant and was completely covered by the ribs. The external contour of the stomach was unaltered. The stomach was opened along the middle of the anterior surface and the tumor was then seen to lie entirely in the stomach wall and was covered by a perfectly intact mucosa which bulged into the lumen of the organ at this point. The tumor was 3.5 cm. in diameter and almost spherical. On opening it was found to contain a quantity of thick yellow caseous material which flowed with difficulty. The wall of the tubercle was found to consist of necrotic material. The mucosa of the stomach was slightly injected and covered with mucus. Near the pylorus were several small superficial ulcers, varying from 3 mm. to 1.2 cm. in diameter. These were surrounded by a zone of bright red mucosa.

The œsophagus showed two small diverticula, 2 cm. below the bifurcation of the trachea. No lymph glands were found in relation to them. The intestines and rectum showed nothing of interest. The aorta showed numerous arterio-sclerotic ulcers. The brain and spinal cord were normal.

Anatomical Diagnosis.—Bronchopneumonia; chronic bronchitis; emphysema; chronic pleuritis; chronic fibroid pericarditis; fibroid myocarditis; chronic verrucose endocarditis of the pulmonary and mitral valves; chronic sclerotic endocarditis of the aortic valve; sclerosis of the coronary arteries; arterio-sclerotic ulcers of the aorta; chronic peritonitis; diverticula of the œsophagus; caseous tubercle of the stomach; ulcers of the stomach; atrophy of the spleen; perisplenitis; chronic interstitial nephritis with cysts of the kidneys; cholelithiasis; concretions of the appendix; fibromyoma of the uterus; onychogryphosis.

Microscopical Examination.—Portions of all the organs and any suspicious lymph glands were hardened in Zenker's fluid, and, in addition, pieces from the walls of the tubercle, the superficial ulcers and the normal stomach mucosa were hardened in formalin.

The right lung showed areas in which the alveoli were filled with red blood cells, polymorphonuclear and other leucocytes, desquamated alveolar cells and a small amount of fibrin. The vessels in the alveolar walls were dilated and filled with blood. The center of several of the larger of these areas did not stain well and was evidently necrotic. No giant cells could be found and nowhere could any structure be made out which could be considered a tubercle. The alveoli of both lungs were large and in many places the interalveolar walls were wanting. The bronchi were much injected and filled with mucus containing a few leucocytes.

The adhesions in the pericardium, pleuræ and peritoneum consisted of ordinary connective tissue with very few nuclei and vessels. There were no giant cells or masses which could represent the remains of a tubercle. The lymph glands showed no evidence of tuberculosis. The other organs showed no lesions in any way bearing on the origin of the tuberculosis.

Sections from the various parts of the stomach removed were stained with hæmotoxylin and eosin, Mallory's stain for connective tissue and for tubercle bacilli. Smears from the caseous material in the tubercle were stained in hæmotoxylin and eosin, Löffler's methylene blue and Mallory's method for tubercle bacilli. One cubic centimeter of the caseous contents of the tubercle in sterile salt solution was injected into each of two guinea pigs; one intraperitoneally, the other subcutaneously. The former died on the nineteenth day after inoculation and no evidences of tuberculosis were found either histologically or bacteriologically. The second was killed at the end of seven weeks and tubercle bacilli were found in smears from a nodule formed at the point of inoculation, from the enlarged inguinal lymph glands and the spleen. Histologically, the point of inoculation, the inguinal lymph glands, the spleen and the liver showed tubercles in an early stage. Portions of the inguinal lymph glands, placed on dog's blood serum, showed the presence of the tubercle bacillus in pure culture.

Sections from the stomach in normal areas showed a slight atrophy of the mucosa, with increase in the intertubular connective tissue and the mucus secreting cells. Those through the superficial ulcers showed a loss of the outermost part of the mucosa with injection of the vessels. No tubercle bacilli could be found in any of the sections examined.

The tubercle showed the following structure: The mucosa covering it was perfectly intact. There was no evidence of ulceration or of an active inflammatory process, and it in every way resembled that from other parts of the same region of the stomach. The submucosa showed no change beyond a slight injection of the vessels similar to that seen elsewhere in the stomach. The muscularis was split into two layers, between which lay (1) a layer of connective tissue passing gradually into (2) a layer of cells which gave place to (3) the caseous material of the tubercle. The cells in the second layer were of three types: (1) cells with large, deeply-staining nuclei and little protoplasm; (2) so-called endothelioid cells, which in some places were arranged concentrically around (3) a few scattered multinuclear giant cells. At the edges the splitting of the muscularis into two parts could be easily seen. The peritoneal surface was thickened by a layer of connective tissue inside of which could be distinctly seen a thin band of non-striped muscle, in some places split into overlapping islets by the connective tissue growth. This was beautifully shown by specimens stained by Mallory's connective tissue stain. Inside of this, as before mentioned, was the layer of connective tissue surrounding the tubercle, the thin band of non-striped muscle lying between the two layers and being continuous with the muscularis at the edges of the tubercle. Sections stained by Mallory's method for tubercle bacilli showed the presence of a few bacilli chiefly in giant cells.

The smears made from the caseous material showed nuclear

fragments and other cellular debris, and the presence of no organisms other than tubercle bacilli, which were found in only one of the smears examined. Cultures made from the caseous material showed no growth at the end of ten days.

The occurrence of a solitary tubercle, similar to those found in the central nervous system, in the stomach, an organ whose freedom from tuberculosis is remarkable, has not been before recorded. A careful search of the literature has revealed no similar case. Tuberculous ulcers have been described by Hamilton,[1] Blumer,[2] Przewoski,[3] with reviews of the literature; Wilms [4] has reviewed the literature of miliary tuberculosis and has described cases. None of the above observers have considered the tuberculosis of the peritoneum covering the stomach which occurs with every case of tuberculous peritonitis.

The lesions in none of the described cases have been primary in the stomach, but have been accompanied by extensive tuberculosis of other organs, the disease in the stomach being of a comparatively late origin or, in the miliary cases, a part of a general miliary tuberculosis. In these cases the lesion was primary in the submucosa or the peritoneum, or involved the stomach by direct extension, as from a caseous lymph gland. The muscularis was rarely involved and only by extension and not as in this case, was it the primary seat of the disease. In some cases the two forms were combined, an ulcer resulting from the breaking down of a tubercle or tubercles occurring by extension of the process from an ulcer through the lymphatics.

The presence of non-striped muscle completely surrounding the tubercle leaves no doubt as to the primary seat of the disease in the stomach. The question as to where the original focus of infection occurred is difficult to answer. The autopsy revealed no other definitely tuberculous lesion, but the nature of the process, giving rise to the peritonitis, pleuritis and pericarditis, must be considered. The peritonitis suggested, at the autopsy, rather an infection arising from the genitals as the adhesions were most marked in the lower part of the abdomen and in the pelvis. It is well known that a serous membrane tuberculosis may heal and leave no trace of its original nature, but it is doubtful if one so extensive could occur without leaving more evidence of its existence. The lymph glands throw no light on the subject, as they showed no evidence of tuberculosis at the time of the autopsy. The age of the patient and the low virulence of the bacilli isolated show that the process was an extremely chronic one.

The similarity of this case to those of the rare so-called simple abscess of the stomach, recorded in the literature as having been found at autopsy,[5] is striking and a more careful microscopical and bacteriological examination may in future show certain of them to be tuberculous.

Clinically the case is of little interest, as the condition gave rise to no symptoms during life. Had the tubercle been situated in any other position than under the costal margin, a careful examination would probably have revealed the tumor, as it could be readily palpated through the stomach wall at the autopsy.

CONCLUSIONS.—(1) The case is one of solitary tubercle in the muscularis of the stomach in which tubercle bacilli were found in the tissues and recovered from an experimental animal with the production of the typical lesions of tuberculosis.

(2) It is impossible to state whether the lesion was primary in the stomach, but there is no definite evidence to the contrary.

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THE CONTROL OF HEMORRHAGE FOLLOWING PELVIC OPERATIONS BY PACKING THE PELVIS WITH GAUZE THROUGH A PROCTOSCOPE AND MAINTAINING COUNTER PRESSURE BY PACKING THE VAGINA.

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The following cases, I think, serve to bring out certain important features in the control of hemorrhage following operations in the pelvis. In many instances there is very little opportunity for post-operative hemorrhage, as when the larger vessels have been dissected out and ligated separately and during the operation there has not been any difficulty in controlling all oozing by means of ligatures. On the other hand, there are cases where the control of the bleeding is more difficult, as where the uterine or ovarian vessels are tied in a mass of tissue, on account of the invasion of these parts by an inflammatory process, or the development of an ovarian cyst or a myoma in the broad ligament may displace these vessels so as to render their control difficult.

Usually the uterine and ovarian vessels can be satisfactorily ligated, and the surgeon can reassure himself that whatever the source of the trouble may be, it is not from these vessels,

for the most important aid in the diagnosis or location of the cause of any post-operative complication is the knowledge of the possibility of such a complication arising, from certain things which occurred during the operation.

The control of oozing from raw areas is sometimes very troublesome, as for example in the raw area on the side of the pelvis caused by the removal of an adherent tubo-ovarian inflammatory mass. Here the operator realizes that sutures passed by means of a needle may injure the ureter or by pricking large vessels may only increase the hemorrhage already present. In many instances his only resource is to pack tightly with gauze.

The most difficult hemorrhage to control is from the large pelvic veins. One can usually see a cut or injured artery, because the blood spurts from it and so the artery can be readily located and clamped and a free ligature placed about it. On the other hand, the localization of an injured vein is more difficult, for the blood wells up from the bottom of the pelvis, obscuring the field of operation, and one can control it only by firm pressure. Any attempt at clamping is done blindly and associated with the danger of tearing the vein and so increasing the hemorrhage or of injuring neighboring structures. The passing of sutures by means of a needle is also dangerous, as the vein may be torn, other vessels injured, or large nerves or the ureter included in the ligature. In some instances pressure may be made over the bleeding area until the hemorrhage ceases and then gradually released and the vein clamped and a suture placed about it or a needle carefully passed around the vein, or the vein may be compressed by a ligature which has been passed through a mass of tissue surrounding the vessel. In other cases the only means available is to pack tightly with gauze.

During the last four months I have seen two cases of post-operative hemorrhage, where interference seemed to be indi-

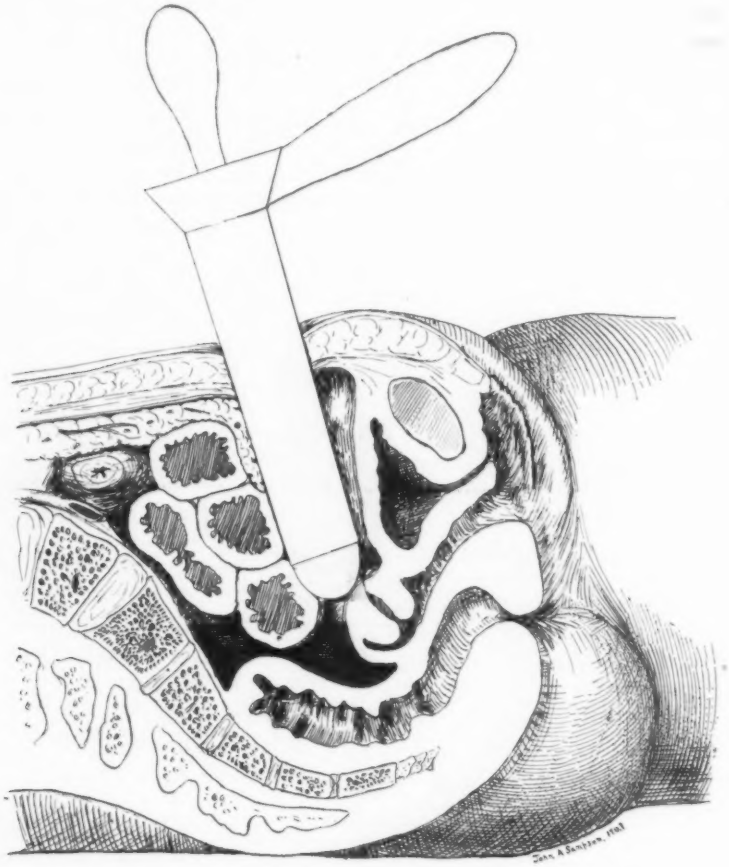

FIG. 1.—INTRODUCTION OF THE PROCTOSCOPE INTO THE PELVIS.

The lower end of the abdominal incision has been opened, and the proctoscope has been inserted through the opening into the abdominal cavity, taking care to direct the end well forward against the bladder, so that the coils of the intestines will be displaced backwards.

In this instance the uterus with appendages have been removed, leaving in the cervix. By removing the obturator the various portions of the pelvis may be inspected, and here one can see that there is a small accumulation of fluid in the pelvis.

cated. Both patients were very ill. The removal of either of them to the operating room and the shock attendant upon the use of an anesthetic, reopening the abdominal incision and repacking the pelvis, would have been attended with great risk. Yet both of these patients recovered and the hemorrhage was controlled by means of gauze packed into the pelvis through a proctoscope. A tight abdominal bandage was put on, and in one instance counter pressure was obtained by packing the vagina with gauze, and a pad was placed over the perineum and held tightly in place by means of a perineal strap.

In a third case, post-operative hemorrhage was excluded by opening the lower end of the abdominal incision and inserting a proctoscope, and thus the pelvis and field of operation were examined. In a fourth case a severe hemorrhage occurring on the eighth day from an amputation of the cervix, was controlled by packing the vagina.

CASES.

Case I.—Miss A. R., white; age 22. Gyn. No. 10508.

Diagnosis.—Double salpingitis, with general pelvic adhesions.

The adhesions between uterus, appendages and other pelvic structures were very dense, so that freeing and removal of the tubes and ovaries caused much oozing. This was controlled by sutures where possible, and two gauze drains were placed in the pelvis on either side of the uterus and the ends of these were brought out at the lower end of the abdominal incision.

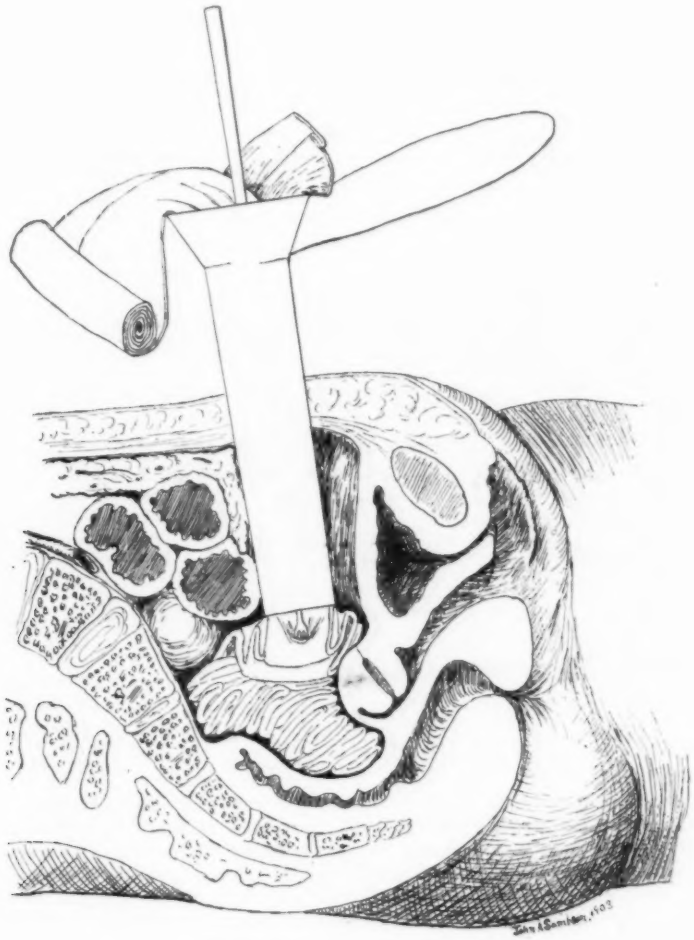

FIG. 2.—PACKING THE PELVIS THROUGH A PROCTOSCOPE.

The gauze may be packed through the proctoscope, beginning at the bottom of the pelvis and moving the end of the proctoscope from side to side, as one pushes the gauze through and gradually withdrawing the instrument as the pelvis becomes filled. The last portion of the drain should not be pushed through the proctoscope, but should be held back and should another drain be necessary it can be pushed in alongside of the first one, as shown above. The lumen of the proctoscope is sufficiently large to hold several drains, but should it become filled and more gauze be necessary, the proctoscope may be removed and reinserted and the packing continued as in the first instance.

Post-operative Condition.—At the close of the operation the pulse was 170; general condition was bad. In half an hour the pulse dropped to 124 and the patient seemed better. Patient's condition remained about the same for the first four hours following operation. During the next two hours her pulse rose gradually from 124 to 160, becoming scarcely perceptible. Extremities were cold, and the patient was very restless. The abdominal dressings became soaked through with a bloody discharge within the first four hours. These were removed and fresh ones were placed over the abdominal incision, which soon became saturated with bright red blood. From the above post-operative hemorrhage seemed evident.

Treatment.—Patient was too ill to endure a second operation. A small proctoscope was sterilized by boiling, then inserted in the lower angle of the abdominal incision and gently pushed down into the pelvis to one side of the uterus, alongside of the drain which had been put in at the operation. The obturator was removed and gauze was packed through the proctoscope into the pelvis, the proctoscope being removed as this part of the pelvis became filled with gauze. The proctoscope was now removed and reinserted into the pelvis at the other side of the uterus and gauze was again packed into the portion of the pelvis exposed by the proctoscope. A pad was placed over the lower portion of the abdomen and a Scultetus bandage was put on very tightly.

The hemorrhage was controlled as was shown by the gradual improvement in the patient's condition and by the marked diminution in the discharge on the abdominal dressings.

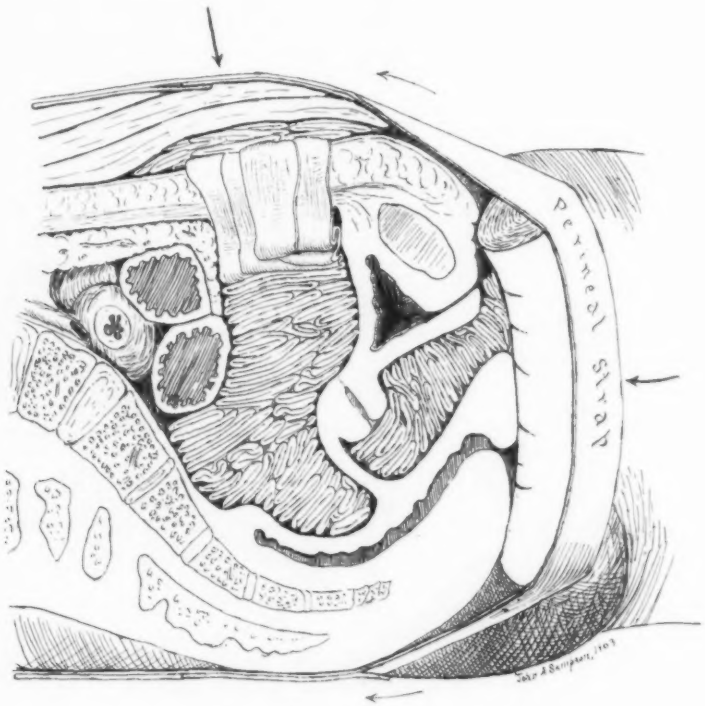

FIG. 3.—BOTH PELVIS AND VAGINA HAVE BEEN PACKED WITH GAUZE, AND BY MEANS OF SUITABLE PADS AND A TIGHT BANDAGE THE PADS ARE HELD FIRMLY IN POSITION.

The pelvis has been packed with gauze drains, whose ends emerge at the lower end of the abdominal incision. Gauze pads have been placed over the abdomen and these are held in place by a Scultetus bandage which has been put on tightly. The vagina has been packed with gauze in such a manner as to elevate the cervix, thereby lessening any bleeding from the uterine and cervical arteries. The vaginal pack is maintained in place and the pelvic floor is supported by a roller bandage which has been placed against the perineum and held there by a perineal strap, which coming from the posterior portion of the bandage is drawn tightly over the perineum and fastened to the bandage over the anterior abdominal wall. Thus the pelvis and vagina are not only packed with gauze but pressure is maintained by the tight abdominal binder holding the pads in position and counter pressure by the perineal strap holding the roller bandage against the perineum.

Result.—Recovery.

The removal of the packing was gradually done after the fourth day, all being removed by the eighth day.

Case II.—Mrs. L. T., colored; age 43. Gyn. No. 10591.

Diagnosis.—Multinodular myomatous uterus; Pyosalpinx, right; Tubo-ovarian abscess, left.

Operation, July 6, 1903.—Hystero-myo-salpingo-oöphorectomy (bisection of the uterus).

The uterus was bisected, the right half removed first and then the left.

The oozing from the cervical stump was very free as well as from the raw areas caused by freeing the adherent appen-

dages. On the left side it was found to be impossible to remove the entire wall of the abscess, consequently a portion of it was left in. Six gauze drains were placed in the pelvis, the ends of which extended out through the lower angle of the abdominal incision. During the operation the patient received a subcutaneous infusion of normal saline solution of 700 cc.

Post-operative Condition.—At the close of the operation the pulse was 136. General condition poor.

Condition remained about the same for the first two hours, then the pulse gradually became more rapid, reaching 150 four hours after operation, and at the same time it became poorer in quality and irregular. The abdominal dressings were changed frequently and were found to be saturated with a bright red discharge. Patient was restless, no pain present, extremities were cold.

Treatment.—A small proctoscope was inserted in the lower angle of the abdominal incision and pushed into the pelvis alongside of the drains already present. Through this proctoscope gauze drains were packed into the pelvis as in Case I. Pads were placed over the abdominal incision and the Scultetus bandage was drawn on very tightly. The vagina was packed tightly with gauze and a pad was placed over the perineum and the perineal strap of the Scultetus bandage was drawn tightly over the perineum and fastened to the bandage over the obdominal wall.

The hemorrhage, which probably arose from the cervical stump and raw surfaces caused by the partial removal of the tubo-ovarian abscess, was apparently controlled by this treatment, for the staining of the dressing became less and while the pulse was rapid for several days, the patient's general condition gradually improved.

Result.—Recovery.

The vaginal packs were removed on the fifth day and the abdominal drains were loosened and then gradually removed.

Case III.—Miss M. W., colored; age 37. Gyn. No. 10593.

Diagnosis.—Myoma uteri.

Operation, July 8, 1903.—Hystero-myomectomy.

The ovarian and uterine vessels were tied with silk and the uterus was easily removed and all raw areas were covered over with peritoneum. Pulse was 112 at the close of the operation, and the general condition was excellent.

Post-operative Condition.—Convalescence at first was all that could be desired.

On the morning of the third day, patient became restless. In three hours the pulse rose from 112 to 136. The extremities became cold; general condition poor; temperature 97°.

Treatment.—It was impossible to make a diagnosis. The operation was not difficult and the chance for hemorrhage was very slight.

The gradual increase in the rapidity of the pulse, with the clammy condition of the extremities, suggested hemorrhage. The lower end of the abdominal incision was reopened and a proctoscope inserted through this into the pelvis. The pelvis was exposed and no evidence of hemorrhage found. The pelvis was not packed with gauze, as nothing was found to indicate such measures.

Result.—Patient died. Probable cause of death was heart failure.

Autopsy was not permitted.

Case IV.—Mrs. P. T., white; age 34. Gyn. No. 10522.

Diagnosis.—Myoma in anterior wall of cervix.

Operation, May 30, 1903.—Amputation of the cervix.

A circular amputation of the cervix was done and the vaginal wall was sutured to the cervix with catgut sutures.

Post-operative Condition.—Convalescence uneventful until the morning of the eighth day, when patient stated that she thought she was menstruating, as it was the time for it and she noticed a slight bloody discharge. At 2 P. M. the bleeding was very free, but it lasted for only about twenty minutes and then ceased. At 5 P. M. the patient had another hemorrhage and this time the vagina was packed with gauze. The bleeding so far, while it has been free, had not been sufficiently great to cause any alarm or to have any effect on the patient's condition. Two hours later the patient had another hemorrhage, the vaginal packs were expelled and the patient lay in a pool of blood. Pulse could not be counted and was just palpable at the wrist. The extremities were cold. There was dyspnœa and the patient was so weak she had difficulty in speaking.

Treatment.—The vagina was packed tightly with gauze, care being taken to lift the cervix up and pack first beneath it. Pads were placed over the lower portion of the abdomen and a very tight Scultetus bandage was put on. A firm pad was placed over the perineum and this was held tightly in place by means of a perineal strap fastened to the bandage in front.

Result.—Recovery.

Vaginal packs were removed on the third day.

In addition to the above these patients received subcutaneous infusions of salt solution, were stimulated with digitaline and strychnia and were given morphia when restless.

METHOD OF PACKING THE PELVIS THROUGH A PROCTOSCOPE.

1. The lower end of the abdominal incision should be opened sufficiently to admit the proctoscope.

2. The proctoscope, which has been boiled and then dipped in sterile vaseline or oil, should now be pushed through the incision down into the pelvis, as shown in Fig. 1. The instrument is smooth and causes very little pain. The obturator may be removed and various parts of the pelvis may be seen by turning the end of the instrument from side to side. For this purpose reflected light is best, using an artificial light with head or hand mirrors. Should one wish to insert the proctoscope further into the pelvis, it is best to replace the obturator before doing so.

3. The pelvis may now be packed with gauze, as shown in Fig. 2. One can use a long pair of forceps or a packer and by turning the end of the proctoscope from side to side the various portions of the pelvis may be reached, gradually withdrawing the instrument as the pelvis becomes filled. Should

the lumen of the instrument become filled with gauze, thus preventing the insertion of more, the proctoscope should be removed and reinserted, and the packing continued as in the first instance.

4. The ends of the drains or packs should be folded over the incision and covered with gauze pads. The abdominal binder should be drawn on very tightly so as to make pressure over the gauze pack as indicated in Fig. 3.

Method of Packing the Vagina.

Place the forefinger of one hand in the vagina and push the cervix upwards, and pack the gauze in beneath and posterior to the cervix so as to lift the cervix up. This is very important, for by lifting the cervix up bleeding from the cervical and uterine vessels may be greatly lessened. I have frequently noticed that in abdominal operations where a hysterectomy has been done and the cervix has been left in, by drawing the cervical stump upwards bleeding from the cervical vessels or even from the uncontrolled uterine vessels may cease, to commence again as soon as the cervix is released. The same principle should be applied in packing the vagina. The vagina should also be packed very tightly so as to compress the vaginal veins which help to form the utero-vaginal plexus. After packing the vagina a firm pad or roller gauze bandage should be placed over the perineum and firmly held in place by means of a perineal strap (see Fig. 3). Before placing the perineal pad in position and drawing the strap about it, a firm pad should be placed over the lower portion of the abdomen and a tight abdominal bandage should be put on, if this has not already been done. The perineal strap may now be drawn tightly over the perineum and fastened to the abdominal binder, thus holding the gauze in the vagina and maintaining pressure over the perineum. I think that packing the vagina is of great service when the pelvis is packed from above, and likewise that the placing of pads over the lower portion of the abdomen and a tight abdominal binder also aid when the vagina alone is packed.

Advantages of the use of the proctoscope are:

I. Frequently a diagnosis may be made in obscure cases. The lower end of the abdominal incision can be opened easily in the first twenty-four to forty-eight hours and the insertion of a smooth metal instrument like a proctoscope gives rise to but very little pain. The question of the diagnosis of post-operative complications in some instances is easy, but in other cases it is very difficult. Because a patient does badly after one operation it is certainly not a clear indication that she should have another. The rapid pulse may mean broken cardiac compensation, and an elevation of temperature may be a beginning pneumonia; and these conditions could not be benefited by a second operation. On the other hand, should hemorrhage or peritonitis be present they demand immediate attention. By this method one has a means of examining the field of operation without causing the patient much shock or pain.

II. Hemorrhage in certain instances may be controlled as in Cases I and II.

III. The packing of the pelvis with gauze is done through a sterile tube and so there is less danger of carrying in infection, likewise the pain is very little.

IV. The proctoscope has great advantages over the cylindrical packer in use a few years ago. It has an obturator and so can be inserted with ease; it is much larger, thus permitting an inspection of the field of operation and easily permitting the packing of wide strips of gauze, which could not be done in a smaller instrument.

In this hospital we have frequently used the large cystoscopes as a means of introducing gauze into wounds, the principle being the same as that of the cylindrical packer. On May 4, 1903, I had occasion to incise the right kidney of a patient (Gyn. No. 10208) who had come into the hospital complaining of cystitis, and later symptoms of renal obstruction developed. A small stone was found in the pelvis of the kidney and a large amount of purulent urine escaped. The bleeding was very profuse and it was controlled by packing the pelvis of the kidney with gauze. The patient's temperature remained elevated and on the third day I decided to remove the gauze from the kidney, thinking that it might be the cause of the elevation of temperature. Before doing so, I had several large cystoscopes boiled, planning to use them should it be necessary to replace the gauze. On removing the drains a very severe hemorrhage took place, but was soon controlled by gauze packed through a large cystoscope which had a diameter of 1.5 cm. Without a cystoscope the packing of the pelvis of the kidney would have been very difficult and very painful. Pads were placed over the lumbar incision and the patient was placed over a sand bag in such a way as to maintain pressure over the wound.

From the use of large cystoscopes in this and previous cases, it occurred to me that the same principle could be employed in the abdomen, and that one could use proctoscopes and thus inspect the field of operation, and, should it be necessary, pack the pelvis through the instrument.

In order to reach the bottom of the pelvis in most cases, the proctoscope should have a barrel about 18 cm. long and in very fleshy patients, possibly longer. A diameter of 2.5 cm. will be found to be large enough. For other work and where one does not care to reach the bottom of the pelvis, smaller ones may be found very convenient, as one I have used which has a length of 11.5 cm. and a diameter of 1.8 cm.

THE JOHNS HOPKINS HOSPITAL BULLETIN.

The Hospital Bulletin contains details of hospital and dispensary practice, abstracts of papers read, and other proceedings of the Medical Society of the Hospital, reports of lectures, and other matters of general interest in connection with the work of the Hospital. It is issued monthly.

Volume XIII is now completed. The subscription price is $1.00 per year. The set of thirteen volumes will be sold for $32.00.

NOTE ON THE DISCOVERY AND FIRST USE OF THE STOMACH TUBE BY AN AMERICAN PHYSICIAN.[1]

BY JULIUS FRIEDENWALD, M. D.

It is generally believed that two English surgeons, Jukes and Bush, are the inventors of the stomach tube. This claim is based on an article published by Jukes in the London Medical Repository of 1822, an abstract of which is found in the American Medical Recorder of 1823, entitled:

"Description of an apparatus for removing poisons from the Stomach, invented by Mr. Jukes, surgeon."

"We might with justice be considered to be forgetful of the duty we owe the profession, were we to fail in laying before them a description of a very excellent apparatus which Mr. Jukes, its very ingenious inventor, favored us with a sight of. It consists of an elastic gum tube, a quarter of an inch in diameter, and two feet and a half in length, terminating at one extremity in a small globe of ivory, with several perforations; the other extremity is adapted either by screw or by plug (the latter is preferable), to an elastic bottle of sufficient size to contain at least a quart of liquid, and having a stop-cock fitted to it, in a similar manner as in the hydrocele bottle. Instead of the bottle, a pewter syringe, of an equal capacity, may be adapted, in the same manner, to the flexible tube. The operation by the syringe is performed more quickly, and may therefore, perhaps, be preferred by some. In cases where surgeons have neither bottle nor syringe, the tube alone might be made to answer the purpose, if the operator apply his mouth to the extremity, and thereby institute the office of a siphon."

"Application.—The patient ought to be placed on the left side, and the globulated end of the tube be then carefully passed to the greater curvature of the stomach, either through the mouth or nostril, as may be thought proper. Having previously filled the bottle or syringe with warm water, at the temperature of 150°, screw or plug it to the tube, turn the stop-cock, and gently force the contents into the stomach. The then diluted contents are to be immediately withdrawn by pulling up the piston; or, if the bottle be applied, the same effect will ensue from its elasticity enabling it to recover its original form, by which the fluid contents will return, charged with the poison. This operation ought to be repeated, till the water, which is withdrawn, becomes clear and tasteless."

"In Mr. Jukes' experiments, first on dogs, and then on himself and others, assisted by Mr. James Scott, Surgeon in Westminster, the apparatus was proved fully to answer the intended purpose. In these experiments, Mr. Jukes swallowed, first, two drachms of laudanum; he afterwards gradually increased the quantity, until it reached ten drachms; since which, he has administered to several individuals (one of them a female) one ounce of laudanum, with an equally successful result. The utility of so well contrived an instrument, arising especially from its being equally adapted to the removal of all the more bulky poisons, must be evident to every one. We consider that Mr. Jukes has rendered an essential service to the profession, and to the community, by its invention."

That the credit of this discovery is due Dr. Physick there can be no doubt. Physick published his original paper October, 1812, in The Eclectic Repertory, Vol. III, page 111, under the title of "Account of a new Mode of extracting Poisonous Substances from the Stomach. By Philip S. Physick, M. D., Professor of Surgery in the University of Pennsylvania," which is ten years prior to the appearance of Jukes' article. The paper reads thus:

"On Thursday 6th June, 1812, I was sent for in much haste at nine o'clock in the evening, to visit two children of Mr. S. B. each three months old. They were twins, and had been affected with hooping cough for several weeks. The mother informed me that in consequence of her children having been very restless the night before, she had this evening given them some laudanum. To William she had given one drop at seven o'clock, and the same dose to Edmund forty minutes afterwards."

"I found William in a state of stupor or very profound sleep, from which he could not be roused, and was informed, that just before my arrival, his whole body had been strongly convulsed; his breathing was laborious and his pulse feeble and slow. On inquiry, I found that vial out of which the drop of laudanum had been given, had contained, several weeks before, nearly one ounce of that medicine, but having been left without a cork, it had dried away so much that one drop only could be obtained for William; in order to procure another drop, two drops of water had been put into the vial and stirred about, by which another drop had been obtained and given to Edmund, forty minutes having intervened between the two doses."

"About a quarter of an hour before my visit, the mother had given to William fifteen drops of antimonial wine, but as it had produced no effect I prescribed an emetic of ipecacuanha, and directed it to be given immediately; this however was found impracticable, as the child was incapable of swallowing."

"At half past nine o'clock, Edmund, who had appeared to be in a very easy sleep, became convulsed, and his pulse and breathing were affected in the same way that his brother's had been. We attempted to give him ipecacuanha, but could not make him swallow it. The countenances of the children became livid—their breathing very laborious; with long inter-

[1] Read at the Johns Hopkins Historical Club, March 9, 1903.

vals between the times of each inspiration, and the pulse in each very feeble."

"Under these circumstances it clearly appeared no time was to be lost, and therefore, as they could not swallow any thing, I determined to inject an emetic into their stomachs. For this purpose a large flexible catheter was passed through the mouth down the œsophagus into the stomach, and through this, one drachm of ipecacuanha mixed with water was quickly injected by means of a common pewter syringe. In hopes that the emetic would operate, I waited some time without any effect being produced. William exhibited now every symptom of speedy dissolution,—his face became very livid,—his pulse and respiration had almost ceased; and indeed the pulse could not be perceived, except a faint stroke or two, after that kind of imperfect and convulsive inspiration which is commonly observed in children just before actual death, accompanied with a convulsed action of the muscles of the mouth and neck. In this situation I passed the catheter again, and by applying the syringe to its projecting end, drew up the fluid contents of the stomach, and immediately injected warm water which was again withdrawn. These operations were alternated two or three times, but when completed no sign of life remained. Hopeless as the case now appeared, I injected some spirit and water mixed with a little vinegar through the catheter;—in less than one minute the child again inspired, the pulse became perceptible at the wrist, and in four minutes, with the aid of external stimuli, both went on so perfectly that there was every reason to believe the child would recover. By the time that these operations were performed on William, Edmund was observed to have passed into the same condition of apparent death, from which his brother had just recovered. The same measures were adopted in his case, and with the same happy effect. I now flattered myself that the children would do well, but in this expectation I was disappointed. In about half an hour, Edmund's breathing became very slow and laborious, and his pulse which had before been very much excited became so feeble, that he appeared to be sinking very fast. Supposing that the effects observed, might be produced by the spirit which had been given occasioning intoxication, I determined to extract it from the stomach and to inject warm water, removing it again. This operation was very quickly performed, but at the conclusion of it I was much distressed by seeing the little patient to all appearance lifeless. Observing in this case, that the actions of life ceased so immediately after the extraction of the spirit, I determined to try it again, and injected a little weak brandy and water. In less than a minute this occasioned a repetition of breathing and of the action of the heart, and in about five minutes both were regularly performed. The symptoms of ebriety took place also in William, but observing that his brother had been nearly lost by extracting the spirit from his stomach, I did not attempt the removal of it in William's case. Doctor Austin who kindly assisted me on this occasion, remained all night with my patients. He informed me, that after some time they became better, through the night. Their bowels were moved several times by castor oil. After five O'clock in the morning Edmund had no convulsions, but they continued with William until twenty-five minutes after nine, when he struggled a little, sighed, and expired. Edmund was troubled for two or three days with a diarrhœa but soon recovered completely."

"The idea of washing out the stomach with a syringe and tube, in cases where large quantities of laudanum or other poisons had been swallowed, occurred to me at least twelve years ago, and I have constantly, for many years, recommended it in my lectures. In the year 1809, Dr. Dorsey performed the operation of washing out the stomach in such a case, but the patient had taken the poison twelve hours before he was called, so that he did not succeed."

Of interest in this connection is a letter published by Physick in the same volume of The Eclectic Repertory, page 380.

"To the Editors of the Repertory.

"When I sent you the communication published in the first number of the third volume of the Electic Repertory, descriptive of what I supposed a new method of extracting poisons from the stomach, I was influenced by a desire to propose to my medical brethren a method of treatment which might preserve the lives of many unhappy persons who either by design or accident had swallowed large doses of laudanum or other poisonous substances. If in a single instance I had been instrumental in preventing death, I should have considered myself very happy; and to have withheld a communication which might have been attended with such beneficial effects, would have been in every respect unjustifiable."

"I have the pleasure of announcing to you and to your readers, that in several instances which have recently occurred in this city, the practice has been completely successful. In two cases treated by Dr. Dorsey, in which large quantities of laudanum had been taken, there is great reason to believe that no other mode of treatment would have succeeded in preventing the fatal event. Both patients were saved by injecting warm water into their stomachs, and extracting it again, together with the laudanum, by means of a syringe. I therefore am happy in having called the attention of the profession to a mode of treatment not before used in this country, at least within my knowledge; but I have now an act of justice to perform, in ascribing the merit of the invention to Dr. Alexander Monro, junior, of Edinburgh, who published it in his inaugural thesis, in A. D. 1797. Of this circumstance I was entirely ignorant when I sent you my paper, and probably should still have remained so, had it not been mentioned in his book of Morbid Anatomy, a work which has but very lately come into my hands."

PHILIP SYNG PHYSICK.

Philadelphia, 20th January, 1813.

That the credit of this invention is due Physick is also shown by Mathews in the Medical Recorder, Vol. X, 1826, page 325, in an article entitled, "Description of an Improved Instrument, for Extracting Poison from the Stomach; with some Statements Tending to Establish the Validity of Dr. Physick's Title to the Credit of having Invented the Stomach Tube."

"It appears that Dr. Alexander Monro, Jr., in his inaugural thesis, published 1797, suggests the use of a tube and syringe, as a suitable means for extracting poison from the stomach, it does not appear, however, that he ever employed

them. About that period, the same plan occurred to Dr. Physick, without having met with the suggestion of Dr. Monro, to whom, however, he subsequently yielded the merit of having made this plan public previous to himself. In the year 1800, Dr. Physick was called to the surgical chair in the University of Pennsylvania, and continued, from that time forward, to inculcate this among other useful inventions with which he has enriched our art, to numerous classes of students, who now constitute a considerable portion of the physicians throughout the union; in proof of this we annex the following certificates, obtained from highly respectable practitioners of this city on another occasion, in order to support Dr. Physick's claim against that of Dr. Thomas Ewell, of the city of Washington, who had the justice to publicly acknowledge Dr. Physick's title upon perusing them. His claim was grounded on his having published, in the Medical Repository, of New York, in the year 1808, a paper 'containing a proposition to relieve the stomach from poison by the use of a catheter.'"

No. 1.

"I do hereby certify, that in the years 1802, 3 and 4, I attended Dr. Physick's lectures upon surgery, and heard him recommend the introduction of a tube into the stomach, in cases where poisonous substances had been taken, through which tube, fluid might be injected by a syringe and extracted again; thereby enabling the practitioner to remove such noxious substances from that organ.

Signed, Philadelphia, June, 1820,

ISAAC CLEAVER."

No. 2.

"I do hereby certify, that I attended Dr. P. S. Physick's lectures on surgery, in the years 1805, 6 and 7, that, in these lectures, the Doctor exhibited a tube coated with elastic gum, brought by Dr. Dorsey from Paris, and made there by Dr. Physick's order, long enough to reach from the mouth into the stomach. With such a tube, Dr. Physick advised to inject water or other fluids into the stomach, and draw them back again by the aid of a syringe, in cases where laudanum or other poisons had been swallowed, and thereby to work them out of the stomach and introduce counter agents.

Signed, Philadelphia, June, 1820,

JOHN D. THOMAS."

No. 3.

"I remember that, in the winter of 1808-9, Dr. Physick informed me that he had an elastic tube, brought from Europe by Dr. Dorsey, for the purpose of injecting fluid into the stomach, and drawing it out again, in order to wash out poisonous substances, such as opium, &c.

Signed, Philadelphia, June, 1820,

BENJAMIN S. JENNY."

"In the year 1803, Dr. Dorsey was in Paris, and had made, by Dr. Physick's order, a tube of the kind now generally used, constituted of the same materials as the French catheter, and resembling it, except in size. That the use for which it was designed was unknown in Paris previous to that period, is evident from a letter from Dr. Dorsey to Dr. Physick, dated 1803, and now in the possession of the latter, in which he states that the makers were curious to know what was the intention of so large a catheter. It was not long before they ascertained the point, and tubes have been since regularly imported from there, for the supply of physicians in the United States.

"In the year 1809, Dr. Dorsey employed the instrument, but unsuccessfully, as the patient died, owing to twelve hours having elapsed before his arrival. In 1812, Dr. Physick had an opportunity of employing it in a case of twins, to whom the parent had given too much laudanum, one of them died, the other recovered. This case was published in the Eclectic Repertory for October, 1812, and has been republished in the second number of the Medical Recorder for 1823. Since that period, it has proved successful in a great many instances, and has become so common a mode of removing poison from the stomach that almost every physician, even in the country, is furnished with a tube and syringe for that purpose.

"With a knowledge of the foregoing facts, our surprise may readily be conceived, when we heard of the invention being announced in the London Medical Repository for October, 1822, as of recent origin, and claimed for Mr. Jukes, of Westminster. And, also, in the London Medical and Physical Journal, for that year, a description of his method by himself, and another modification by Mr. F. Bush, surgeon of Frome, who also claims the honor of the invention. Mr. Bush's mode, is the same as that invented by Dr. Physick, nineteen years before; namely, a tube and syringe. That of Mr. Jukes differs in having an elastic gum bottle, to supply the place of the syringe, which we think no improvement; and his tubes are furnished at the end with an ivory ball perforated with holes, which will be found rather disadvantageous than otherwise, more especially as it is often necessary to pass the instrument through the nose into the stomach, in consequence of the patient proving refractory, and holding the mouth firmly closed, which would be impossible with the ivory ball affixed."

"From the foregoing statement, it will be admitted by every candid individual, that the merit of the invention, is strictly due to Dr. Physick. It will also be perceived, that he was the first to carry it into successful operation."

Dr. Saml. Jackson corroborates this statement in an article in the American Medical Recorder, 1823, referring to Mr. Jukes' work he says, "Whether the early volumes of the Eclectic Repertory ever reached the metropolis of England is rendered doubtful since we find, from the last numbers of the Medical Recorder and of the Journal of Foreign Medical Science, that some of the writers of that city have claimed the invention of a new method of washing and extracting poisons from the stomach, by means of a tube and syringe, for their fellow citizen Mr. Jukes. 'We might with justice,' say they, 'be considered as forgetful of the duty we owe the profession, were we to fail in laying before them a description of a very excellent apparatus which Mr. Jukes, its very ingenious inventor, favored us with a sight of.'"

"We are entirely willing to grant Mr. Jukes all the credit the journalists would claim for him or he claim himself, as the same thought might have occurred to many ingenious men, who were seriously engaged in relieving the distresses of

suffering humanity. But the priority of discovery and the demonstration of its great utility must certainly be awarded to our countryman, Dr. Physick.

"I well remember the satisfaction that Dr. Physick's operation afforded in Philadelphia, and that the invention of it was cordially ascribed to himself. But now, after a lapse of ten years, we find it claimed by the editors of the London Medical Repository for Mr. Jukes, surgeon in Westminster. How much was I surprised in reading their account of it when, at the same time, I could look over my shoulder to a box containing a large syringe with Dr. Physick's elastic tube, two feet long and a half inch in diameter, an apparatus that has occupied that station for the last nine years. It is true that our American tubes are not tipt with an ivory globe, an addition which I cannot but consider as wholly useless."

There can be no doubt from the foregoing that Dr. Physick used the tube as early as 1800 and that he recommended it for many years in his lectures to his students; that by his advice his nephew Dorsey had stomach tubes made in Paris as early as 1803 and employed the tube unsuccessfully in a poisoning case in 1809; and that in 1812 Physick published the report of successful results with its use in cases of poisoning. The work of Jukes first appeared in 1823; there can therefore be no doubt but that Physick was the inventor of the stomach tube and was the first to make practical application of this instrument.

(NOTE.—The reference made by Dr. Physick and others to the invention of the stomach tube by Alexander Monro, Jr., refers to Monro's Inaugural Thesis, published in 1799. Monro merely suggests the use of the tube in cases of poisoning for the extraction of the poison from the stomach and for the introduction of food into the stomach in cases of dysphagia and for extracting gases and food from the stomach in cases of gastric fermentation in cattle. He does not point out, however, that any practical application of the tube was made in cases of poisoning.)

ON A RAPID METHOD OF STAINING NEUROGLIA.

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The methods of staining neuroglia in common use have the drawback that the tissue requires special mordanting for a considerable period of time. In most instances the fresh tissue or the tissue after a short period of fixation has to be used. This renders the methods inapplicable to tissues which have not been specially prepared. The well known methods of Weigert (1), Mallory (2) and Benda (3) are all open to this objection. The tissue in these methods is prepared in bulk and the sections cut from the specially mordanted tissue. The mordant does not appear to have been applied to the cut sections.

The mordants used by Mallory in his method, with slight modification, can be so used, but the stain recommended by him does not give as good results as others. The tissue when mordanted in bulk requires eight days, but this can be shortened to a few minutes by applying it directly to the section. The gentian violet solution of Mallory was first used. The two constituents of gentian violet, methyl violet and crystal violet, were then in turn substituted. While all produced fairly good results, the crystal violet stained most intensely. This stain has been recommended by Benda (3) as the most desirable in one of his methods.

The tissue, obtained preferably within a few hours of death, should be fixed in a 10 per cent solution of formalin (4 per cent formaldehyde). Small pieces give the best results. The entire brain and cord may, however, be hardened without cutting and still give good results. If the fixation has not been thorough the outer part will give a differential stain while the inner part of the tissue will not.

The stain, like all the differential neuroglia stains, will stain fibrin. This, however, will only in rare instances cause difficulty. The results were controlled by staining pieces of the same tissue after proper fixation and mordanting by the methods above mentioned, by the special connective-tissue stains of Ribbert and Mallory and the fibrin stain of Weigert. In every instance that a good preparation with the special neuroglia stains was obtained the stain was successful. Tissue which had been preserved in formalin for six months gave good results.

The neuroglia nuclei and their chromatin and the neuroglia fibres stain a light violet color; the nucleoli of nerve cells and of the endothelium lining the capillaries a similar color. The protoplasm of certain neuroglia cells stains a faint violet color. Many fibres could be seen as processes of these cells. In certain imperfectly differentiated specimens a number of coarse connective-tissue fibres were stained a pale reddish-violet color. The stain would not stain connective tissue in sections from other organs. The method will give fair results on tissue fixed in alcohol but it is uncertain.

The method, while possessing many of the faults of the other methods, has the advantages over the original method of Mallory that it can be applied to any formalin fixed tissue without prolonged special preparation and requires only a few minutes to complete.

Weber (4) calls attention to the great variation in the staining of neuroglia even when attempted under the most favorable circumstances. Whether this stain will ultimately prove to have the same variability cannot be stated.

STEPS IN THE PROCESS.

1. Fix in 10 per cent formalin (4 per cent formaldehyde). The tissue should be obtained within 10 hours of death and fixed, preferably in small pieces.
2. Embed in paraffin (preferably the anilin oil method).
3. Cut 5-15 micra sections and mount on slides in the usual way.
4. Remove the paraffin by means of xylol, absolute alcohol and 95 per cent alcohol.
5. Cover the section with a saturated aqueous solution of picric acid for two minutes. The section should be of a deep yellow color.
6. Wash in water.
7. Cover the section with a 10 per cent aqueous solution of ammonium bichromate for two minutes. The yellow color should be completely removed. If not, repeat.
8. Wash in water.
9. Stain five minutes in

Crystal violet saturated solution in alcohol (95 per cent) ..... 8 cc.
Anilin oil water made by shaking 5 cc. of anilin oil with 95 cc. of distilled water and filtering .....42 cc.

This solution should be freshly prepared. A similar solution of either gentian violet or methyl violet may be used but the stain is not so intense.

10. Wash in water and blot.
11. Cover a 5 per cent solution of potassium iodide which has been saturated with iodine, one minute.
12. Wash with water and blot until the section is dry. If all the water is not removed the differentiation will be imperfect in the portions containing water.
13. Differentiate in anilin oil and xylol, equal parts.
14. Wash thoroughly in xylol.
15. Mount in balsam.

The sections if not exposed to light will keep well. The portions of the section where the neuroglia is abundant are of a deep violet color. The rest of the section is nearly colorless. The method is based on that of Mallory.

REFERENCES.

1. Weigert: Beiträge zur Kenntnis der normalen menschlichen Neuroglia. Frankfurt a. m. 1895.
2. Mallory: On certain improvements in histological technique. Jour. of Experiment. Med. 1897, II, p. 532.
3. Benda: Neurologisches Centralb. 1900, S. 786.
4. Weber: Die heutige Stand. der Neurogliafrage Centralb. f. Path. 1903, No. 1.

NOTES ON NEW BOOKS.

Diseases of the Liver, Pancreas and Suprarenal Capsules. By L. OSER, M. D., E. NEUSSER, M. D., H. QUINCKE, M. D., and G. HOPPE-SEYLER, M. D. Nothnagel's Encyclopedia of Practical Medicine, American Edition, translated under the editorial supervision of ALFRED STENGEL, M. D. Edited with additions by REGINALD H. FITZ, M. D., and FREDERICK A. PACKARD, M. D. (*Philadelphia, New York and London: W. B. Saunders & Co., 1903.*)

In one volume are the comprehensive treatises of Oser on diseases of the pancreas, of Neusser on diseases of the suprarenal capsules, and of Quincke and G. Hoppe-Seyler on the diseases of the liver. Rarely do such laborious reviews of current medical knowledge appear in any other than the German language. The value of Nothnagel's series being fully recognized, it is of special interest to know how well the American editors have fulfilled the task of translation. By addition to the text they have, moreover, attempted to fill the interval which now exists between the German edition published in 1898 and the present translated edition of 1903. The volume is well translated and carefully edited. Though additions to the text are often from necessity abruptly introduced and at times too brief to give a comprehensive view of the subjects treated, the editorial supervision of such recognized authorities as Dr. Fitz and Dr. Packard has added materially to the value of the work.

Comparison of Oser's article on diseases of the pancreas with that of Friedreich, which appeared about twenty-five years ago in von Ziemssen's Encyclopedia of Medicine, and presented a careful summary of the facts then available, will show how extensive is the literature of pancreatic diseases accumulated in the intervening period. The important contributions of von Mering and Minkowski have since appeared and, as Oser mentions in his preface, great impulse has been given to interest in the subject by American physicians, especially through the brilliant work of Fitz and Senn. As an introduction to Oser's monograph, Prof. Zuckerkandl has written a description of the anatomy of the gland. Here as elsewhere in the work scant attention is given to the histological peculiarities of the gland; the editor has, however, added a description of the islands of Langerhans and in the appropriate places has inserted notes in considerable detail upon their relation to carbohydrate metabolism and to diabetes mellitus. The very important investigations of Pawlow have not been noted in the revised edition. Oser has attempted to distinguish between hæmorrhage into the pancreas and hæmorrhagic pancreatitis, and though separate sections are devoted to the two conditions, symptoms of hæmorrhagic inflammation are described in the chapter on simple hæmorrhage. In a brief note the editor has more clearly than the author stated the relation of fat necrosis and its treatment to pancreatic lesions. The bibliography appended to Oser's work has been much enlarged by the editors and occupies thirty-two pages.

Diseases of the adrenals are introduced by a review of the often discordant results of investigations into the physiology and the chemistry of the gland. A summary of the observations of Prof. Abel is appended to the text; the editor accepts the conclusions of Prof. Abel and believes that he has maintained the identity of epinephrin as the constituent of the gland which raises blood pressure. Hay fever and other diseases of the nose and throat in the treatment of which advantage has been taken of the vasoconstrictor action of suprarenal extract are cited by the editor and its employment as a hæmostatic applied locally or administered internally is described. The greater part of the monograph on the adrenal is given to Addison's disease, which in every case the author thinks results from an impairment or complete suppression of the functions of the adrenal capsule, brought about by disease of the capsules themselves or of the nerve tracts con-

trolling their activity. The administration of suprarenal extracts according to the author has been followed by little or no improvement in Addison's disease and in the recent literature cited by the editor no more conclusive results are noted.

More than one-half of the volume is devoted to the diseases of the liver; since our knowledge of the organ has within recent years remained somewhat stationary the treatise excites somewhat less interest than the preceding chapters, and though numerous additions have been made by the editor, these are necessarily briefer and less important than those previously mentioned. Of much value is the introduction dealing with the general pathology and physiology of the organ, since it constitutes an authoritative summary of our knowledge upon these obscure subjects. The various forms of jaundice receive detailed consideration. The article on cholelithiasis written by Hoppe-Seyler is introduced by a historical review and concludes with a section on treatment in which both medical and surgical methods are discussed. Surgical interference is recommended in those cases where internal medication is without avail and when, despite remedial measures, attacks of gall-stone colic recur and undermine the strength of the patient. In view of facts which have been confirmed by abundant observation, the sections dealing with the cause of hepatic abscess and its relation to dysentery are unsatisfactory. Neither in the original text nor in the editorial additions does the Amœba coli receive the attention which it deserves. In an editorial appendix to the section on treatment of hepatic cirrhosis, Dr. Packard reviews the results of operative interference and reaches the conclusion that the results, on the whole, have been encouraging and even as a last resort more beneficial than the less active medical treatment.

It is needless to say that the volume throughout is of very great value. Like other parts of the same series it aims to review the relation of medical practice to normal and pathological physiology and its copious bibliography makes the literature of each subject available.

A Laboratory Handbook of Physiologic Chemistry and Urine-examination. By Charles G. L. Wolf, M. D., Instructor in Physiologic Chemistry, Cornell University Medical College, New York. 12mo volume of 190 pages, fully illustrated. Cloth, $1.25 net. (*Philadelphia and London: W. B. Saunders & Co., 1903.*)

"The object of this book is to supply to students and practitioners of medicine a guide to a course in physiologic chemistry and the examination of the urine and the contents of the stomach. The first part of the book is taken up with simple exercises in physiologic chemistry, which will give an elementary insight into the chemical side of physiologic processes."

"In the part of the book which deals with the urine and the gastric contents, no tests have been given which do not rest on a good chemical foundation. The aim has been to give as few tests as possible, and these to be chosen for their suitability to purely clinical needs. No operations are described which have not undergone a thorough trial with students in the laboratory."

The title on the cover is somewhat misleading. It reads: "Physiologic Chemistry and Urine Examination." On the title page this is changed into "A Laboratory Handbook of Urine Analysis and Physiologic Chemistry." This title indicates better the general aim of the book, although a perusal of its pages indicates that the author intended it to be more than a mere laboratory guide. The experiments in each topic are preceded by a discussion of the physiological properties of the substances included in the topic. These discussions undoubtedly will serve to keep up the interest of the student in the work he is performing in the laboratory. But on the other hand, on account of the nature of the book, these discussions must necessarily be brief and dogmatic. Brevity and dogmatism are very apt to allow of errors in statement. These, it is true, are not very frequent. What is more to be feared is error in interpretation. This we fear may lead to trouble. The book has an air of completeness about it and the student will be very apt to use it as his main, if not his only, guide to physiological chemistry. In such a case physiological chemistry would not receive the deference which it deserves. However, if combined with the use of some other more complete text-book or with a course of systematic lectures, the book will undoubtedly prove valuable to the student and helpful to the teacher.

Physical Diagnosis. Diseases of the Thoracic and Abdominal Organs. A Manual for Students and Physicians. By Egbert Lefevre, M. D., Professor of Clinical Medicine and Associate Professor of Therapeutics in the University and Bellevue Hospital Medical College; Attending Physician to Bellevue and St. Luke's Hospitals, etc. Illustrated with 74 engravings and 12 monochrome plates. (*Philadelphia and New York: Lea Brothers & Co., 1902.*)

So many works on physical diagnosis have appeared within the last few years that the medical student has the utmost difficulty in deciding on a choice, and the instructor has almost equal difficulty in recommending what text-book he should select.

This volume, with 448 pages, is entirely devoted to the physical examination of the thoracic and abdominal viscera in health and disease. The physics of the various cardiac and respiratory phenomena, both normal and abnormal, are given rather more fully than is generally the case in a book of this dimension. This is due, the author states, to the fact that physical diagnosis is taught earlier in the medical course than was the case a decade ago. His explanations of the phenomena are on the whole satisfactory and those usually accepted. The methods of the physical examination of the nervous system are not taken up. In a book of this size the author is wise not to have attempted an account, even a brief one, of the methods of clinical diagnosis as well.

A special feature of the book is the number of plates given illustrating the use of the X-rays in differential diagnosis. We must admit, however, that the reproductions are not very convincing of the reliability of this new aid to diagnosis. We believe that good X-ray plates and photographs may be of service, but great care must be exercised to prevent misinterpretation of the findings. The writer has used the X-ray in an interesting manner in demonstrating the relationship of the trachea and bronchi. The latter have been filled with small shot and then a skiagraph taken. The skiagraph shows very well the branchings of the bronchi in the middle and lower lobes, but not at all well in the upper.

Gibson and Russell's Physical Diagnosis. Third edition revised and rewritten by Francis D. Boyd, C. M. G., M. D., F. R. C. P. Ed.; Assistant Physician, Edinburgh Royal Infirmary; Physician to the Deaconess Hospital; formerly Clinical Medicine Tutor, Royal Infirmary, Edinburgh. With one hundred and forty-four illustrations. (*New York: D. Appleton & Co.; Edinburgh and London: Young J. Pentland, 1902.*)

The first edition of this admirable little work appeared in 1890. In this edition the subject-matter, comprising 448 pages, has been brought well up to date by the editor, Dr. Francis D. Boyd. The volume will be found to be extremely serviceable, not only to the medical student, but also to the practitioner who wishes to become familiar with the most recent methods of diagnosis.

The methods of physical diagnosis are clearly but concisely described. The physical examination of the thoracic and abdominal viscera and of the nervous system is dealt with at greatest length, as would be expected. The volume also takes up the

methods of examining the body fluids and excretions in health and disease. Those methods that have proved most serviceable for diagnostic purposes have been given most attention. The sections on the blood, urine, sputum, gastric juice and fæces are admirable.

We have no hesitation in affirming that this little work, considering its modest dimensions, is the best in its line that has come to the attention of the reviewer. Its great virtues are conciseness and accuracy and it is full of useful, practical information.

Practical Diagnosis: The Use of Symptoms and Physical Signs in the Diagnosis of Disease. Fifth edition revised and enlarged. By HOBART AMORY HARE, M. D., B. Sc., Professor of Therapeutics in the Jefferson Medical College of Philadelphia; Physician to the Jefferson Medical College Hospital, etc. Illustrated with 236 engravings and 25 plates. (*Philadelphia and New York: Lea Brothers & Co., 1902.*)

Four previous editions of this work have been published since its first appearance in 1896, ample evidence of its popularity with students and practitioners. In this, the fifth edition, being a large octavo volume of 698 pages, the methods of practical diagnosis have been brought up to date and the work is sure to retain its good reputation.

The subject-matter has been in large part rewritten and much new matter added. The work is essentially one on semiology and is, in the opinion of the reviewer, designed rather for the advanced student and practitioner than for the beginner. The general plan of the former editions has been followed. The symptoms used in diagnosis are discussed first, and their application to determine the character of the disease comes later. The methods of examining the blood, urine, gastric juice, etc., are given more or less fully and are useful; but as is usually the case in a work of this nature, not sufficiently in detail to obviate the necessity of the student or practitioner purchasing a book or books dealing specially with these methods of examination, if he is desirous of more than a mere smattering of knowledge in this particular line.

The value of the volume is much increased by a profusion of good figures and plates.

Diseases of the Eye: A Handbook of Ophthalmic Practice for Students and Practitioners. By G. E. DE SCHWEINITZ, A. M., M. D., Professor of Ophthalmology in the University of Pennsylvania; Consulting Ophthalmic Surgeon to the Philadelphia Polyclinic; Ophthalmic Surgeon to the Philadelphia Hospital; Ophthalmologist to the Orthopædic Hospital and Infirmary for Nervous Diseases. With 280 illustrations and 6 chromo-lithographic plates. Fourth edition, thoroughly revised. (*Philadelphia and London: W. B. Saunders & Co., 1902.*)

The appearance of a fourth edition of this work at so early a period in its history is good evidence that it still finds favor. A text-book on the eye to meet the requirements nowadays should be written by one who is in teaching contact with students, and that is no doubt why the work of Edward Meyer is so popular in France and the text-book of Fuchs is so widely used throughout Germany and Austria. Both are from the hands of teachers who know what students and practitioners need, and while the work of Fuchs is more exhaustive, more of a reference book than either that of de Schweinitz or of Meyer, still one can see that its author is a teacher. In this country de Schweinitz's work occupies pretty much the same position as do the other two works just mentioned in their respective countries. In this new edition we find special paragraphs on the following subjects: Conjunctivitis Petrificans; Metastatic Gonorrhœal Conjunctivitis; Hysteric Alopecia of the Eyelids; Relapsing Bullous Keratitis; Atheromatous Ulcers of the Cornea or Scar-keratitis; Ophthalmoscopic Signs of General Arteriosclerosis; Traumatic Perforations of the Macula Lutea, the so-called Holes in the Macula; Educative Treatment of Strabismus; Ocular Signs of Diseases of the Sphenoid and Antrum; Acoin; Dionin; Suprarenal Capsule and its preparations, etc. Some of the chapters have been largely rewritten, while others have been either condensed or materially altered. Many therapeutic agents of recent date, particularly the newer silver salts, find mention in connection with the diseases in which they are indicated.

An earlier edition of this work was recently reviewed, and it is unnecessary to go over in detail this fourth edition further than to repeat what was said on a former occasion and to say that the last edition brings the work abreast with what is valuable in ophthalmology and makes it worthy of the highest commendation.

A Text-Book of Materia Medica, Therapeutics and Pharmacology. By GEORGE FRANK BUTLER, Ph. G., M. D., Professor of Materia Medica and Therapeutics in the College of Physicians and Surgeons, Chicago, Medical Department of the University of Illinois; Medical Superintendent of Alma Sanitarium, Alma, Mich., etc. Fourth edition, thoroughly revised, pp. 896. (*Philadelphia and London: W. B. Saunders & Co., 1902.*)

The author has succeeded in producing a very fair text-book, which, however, does not differ in any essential way from the numerous similar ones on the market. The style is clear and the subject-matter well arranged. The final chapter on the relation of Physical Chemistry to Pharmacology is contributed by Dr. Martin H. Fischer, formerly of the University of Chicago. It is significant enough to have a short chapter under this heading appearing in our text-books of Pharmacology, but more space could very profitably be devoted to this subject.

The Practical Medicine Series of Year Books, Comprising Ten Volumes on the Year's Progress in Medicine and Surgery. Issued monthly. Under the general editorial charge of GUSTAVUS P. HEAD, M. D., Professor of Laryngology and Rhinology, Chicago Post-Graduate Medical School. Vol. III, The Eye, Ear, Nose and Throat. Edited by CASEY A. WOOD, C. M., M. D., ALBERT H. ANDREWS, M. D., T. MELVILLE HARDIE, A. M., M. D. (*Chicago: The Year Book Publishers, December, 1902.*)

We are favorably impressed with the practical character of the contents of this volume. Wood's contribution contains not only what will interest the ophthalmologist, but a great deal which will be found helpful to the general practitioner. One will find recorded the most important advances in ophthalmology during the past year and in addition many sensible comments upon the things which are of real value, based upon the experience of one who is a recognized leader in American ophthalmology. The chapters on the Cornea, Ocular Muscles, and Therapeutics are particularly good. The Ear Department, which is assigned to Andrews, brings the advances in otology up to date and consists of well-selected abstracts from recent otological literature. We miss here the numerous editorial comments which help to make the Eye Department such an effective article. The Nose and Throat Department is edited by T. Melville Hardie and will be found to contain a full account of what has been going on in these branches during the past year. We are glad to see that the editor has taken the opportunity to give many of his own views.

The volume as a whole then is full of useful information and we might only suggest that in future those who participate in its editorship will seize the opportunity to throw more of the personal element into their contributions.

Burdett's Hospitals and Charities, 1903. Being the Year Book of Philanthropy and the Hospital Annual, containing a review of the position and requirements, and chapters on the management, revenue and cost of the charities. By SIR HENRY BURDETT, K. C. B., editor of "The Hospital," etc. (*London: The Scientific Press (Limited), 28 and 29 Southampton St., Strand, W. C.; New York: Charles Scribner's Sons.*)

This unique and excellent volume is in its fourteenth year. It is hardly possible to conceive how the information contained in it could be secured elsewhere. It represents an amount of labor somewhat appalling, expended both in securing statistical information and in interpreting it after it has been gathered from all quarters of the globe. The statement is often made with a degree of truth that hospital work is not sufficiently correlated and that uniformity of procedure is lacking even in the most advanced institutions. This is doubtless partly due to the fact that hospital management has not yet attained to the dignity of a settled profession, and in America at least its excellence or otherwise depends quite too much on the merits or demerits of the man who holds the position of superintendent. Allied to this, however, is the stronger reason that no settled system of hospital administration exists in America or Europe. The duties of the superintendent, the relations of the nurses to the hospital, the system of accounts, and even methods of tabulating patients and computing recoveries or mortality, all vary in different hospitals. It accordingly follows that the operations of different hospitals cannot be compared and officials lose the stimulation to the best work which follows a rigid comparison with the results attained in other hospitals. The object of this book is to introduce and enforce uniformity in accounts and statistics to the end that the results of charity may be accurately known. An admirable summary is given of the present condition of English hospitals and much encouragement can be derived from the great relief to the finances of the London hospitals by the King Edward Fund. If a similar movement could be initiated here it would relieve great anxieties on the part of hospital managers. The advantage of close co-operation between hospitals is also admirably shown by the results in London. A strong plea is made for the absolute financial separation of the charity hospital and the medical school. The author's statement that "it is essential that every voluntary hospital where medical education is provided shall so adjust the relations between these two bodies as to secure that not one penny of the money given by the public to the relief of the sick poor shall be devoted to the purposes of medical education," commends itself to all.

He also regards it as desirable that every large hospital should have a medical superintendent. He says: "In a clinical hospital where the *personnel* of the resident medical staff constantly changes, where there is necessarily a large number of medical students and an equally large and increasing number of probationer nurses, there must be an ever-growing tendency to carelessness in the use of materials, such as bandages, lint and a host of other things, which will tend to increase rather than to diminish, unless every detail is constantly supervised with watchful care by an officer of responsibility, of wide discretion and sufficient influence. We believe from a close comparison of the expenditure of a large provincial hospital where there are no medical students, with several of the large London clinical hospitals where the cost per bed has steadily gone up year by year for a number of years past, that there is a growing tendency in the direction of wasteful expenditure due to the absence of adequate control within the walls of certain clinical hospitals. The matron may be the ablest of her class; she may possess the widest experience and be untiring in her zeal to secure the best results and efficiency, but whatever she may do, it is not her province, nor ought she to attempt to exercise authority outside her department, for efficiency in administration can alone be maintained by having a system which includes a medical superintendent, resident medical officers, a matron and all other minor officials, each entrusted with definite duties confined to their individual departments and working together for the good of the whole institution under the immediate personal direction of a medical superintendent of the highest attainments, whose controlling hand is essential, if the maximum of success is ever to be secured."

A chapter of the book is devoted to a discussion of the question of Home and Foreign Missions. Statistics are given to show that, as might naturally be expected, the percentage of administration expenses to contributions received is very large in the smaller missionary societies, and that as business enterprises they are open to criticism. The tone of the book is in no sense hostile to missions and the facts and figures merely are presented. The sensible suggestion is made that in the field of foreign missions a greater degree of co-operation be sought, so that the world may be divided up in a systematic manner among the various mission boards to the end that duplication of effort and unwholesome rivalry may cease.

There are excellent chapters on nursing in London, on the hospitals of the United States, on the cost of out-patient departments of hospitals, and other equally interesting topics. The book deserves to be in the hands of every philanthropist and charity worker.

The Latin Grammar of Pharmacy and Medicine. By D. H. ROBINSON, Ph. D. With an introduction by L. E. SAYRE, Ph. M., Professor of Pharmacy, etc., University of Kansas. Fourth edition, with elaborate vocabularies, thoroughly revised by HANNAH OLIVER, A. M., Assistant Professor of Latin, School of Pharmacy, University of Kansas. (*Philadelphia: P. Blakiston's Son & Co., 1903.*)

We had occasion to commend a first edition of this book several years ago. The present work is substantially a new book, being modified in many important particulars to fit it better for the use of students of medicine and of pharmacy. It is interesting to observe that the authors believe that the best manner to teach the student of medicine to read and write prescriptions in Latin is to teach him the language. In some treatises on prescription writing and pharmacy we have observed a tendency simply to teach the bare words to be used without reference to teaching anything more of Latin. The method adopted in this work seems much more in accordance with the spirit of a proper education. It surely is better that the student should learn to use medical Latin rather than that he should learn a few essential words by rote, parrot-fashion, without any conception of the laws and usages of the language. The vocabularies are very good and the index is satisfactory.

Lessons and Laboratory Exercises in Bacteriology: An Outline of Technical Methods Introductory to the Systematic Study and Identification of Bacteria. By ALLEN J. SMITH, M. D., Professor of Pathology in the University of Texas, Galveston. Price $1.50. (*Philadelphia: P. Blakiston's Son & Co. 1902.*)

This manual resembles Frost's Laboratory Guide, but lacks many of the excellent features of that introduction to bacteriology, especially the simple arrangement and the close relation of the exercises to the systematic study of bacterial species. The book is superior in typography and general appearance. Bacteriological technique is fully presented, much matter being included for which the student usually seeks in text-books or reference-books. It is gratifying to note that classification is dealt with from a scientific standpoint and that use is made of the new nomenclature. It is to be regretted that the commonly used equivalents are not presented with the preferred names. Although

Bacillus pyocyaneus may be recognized under the name Pseudomonas pyocyanea, one is left in doubt as to the identity of Bacterium pneumonicum and Bacterium pneumoniæ. The list of equivalents given on page 272 is of historical interest, but of little value for the differentiation of the terms now in use.

The excellent feature of the book is its completeness. From the mass of material presented the teacher may select the exercises best suited for class use and supply the lack of close relation to the study of individual species for which the only provision is the supply of blank sheets for the description of culture features, etc.

The appearance of so large a number of these manuals and laboratory guides to bacteriology makes one question whether there is a real need for so many, and suggests that some official publication, i. e., by the Bacteriological Committee, might better meet the needs of teachers and students.

Eye Symptoms as Aids in Diagnosis. By EDWARD MAGENNIS, M. D., D. P. H., late Clinical Assistant at the Royal London Ophthalmic Hospital, etc. (*Bristol: John Wright & Co.; London: Simpkin, Marshall, Hamilton, Kent & Co., Limited, 1903.*)

This is a convenient little manual which may be commended to physicians in general practice who desire to refresh their knowledge of matters essential to the diagnosis of diseases other than those of the eye. The summary of the relations of the pupils to organic brain disease is admirable and very serviceable. The same may be said of the portion of the book which treats of the fundus of the eye and of the ocular muscles. A glossary of ophthalmic terms is appended, also a full index. The book is a valuable aid to the busy physician.

Obstetrics. A text-book for the use of students and practitioners. By J. WHITRIDGE WILLIAMS, M. D., Professor of Obstetrics, Johns Hopkins University; Obstetrician-in-Chief to the Johns Hopkins Hospital, etc. With eight colored plates and six hundred and thirty illustrations in the text. (*New York and London: D. Appleton & Co., 1903.*)

The contributions to medical literature by Professor Williams have been of such importance, and his reputation as a teacher is so well known, that the appearance of this volume has been awaited with unusual interest and has attracted much deserved attention.

The work, which is dedicated to Professors Welch and Councilman, is a well printed and well illustrated volume of some 850 pages. The text reads unusually easily, for it is modestly written in a very clear style. As if forecasted by the dedication, the histology and pathology of the subject are treated in a most lucid and comprehensive manner, one that admits of but little comparison with other kindred English text-books. The author states in the preface that he hopes the volume may serve as a laboratory guide for the student, and we surely know of no other that may fill such a place in so acceptable a manner. More than that, it forms the nucleus of a most excellent bibliography. The scheme adopted has been to refer to the various articles which mark the history and the recent advances of each subject. These references have been verified in each instance. Where the bibliography of the subject is unusually large, especial mention has been made of those articles which are particularly rich in the literature of the subject. The bibliography is arranged at the end of each chapter.

The admirable treatment of the subject-matter is well shown by the opening chapter upon the pelvis. It is considered from the historical, obstetrical, sexual, racial and developmental points of view. The clinic of the Johns Hopkins Hospital obstetrical service is especially rich in contracted pelves, and in considering the racial differences in the pelvis, the author calls attention to the very interesting fact that contracted pelves occur several times more frequently in blacks than in whites (21 per cent and 7 per cent), while the frequency of operative deliveries is greater among the latter. This would appear to be due to the smaller size of the head of the colored fœtus, and its greater compressibility, which the author believes may be attributed to the poorer nourishment of the colored race in the large cities.

The chapters dealing with the anatomy and embryology are of unusual merit. No attempt has been made to trace the development of the ovum through all its stages, but the changes which are directly concerned in the formation of the fœtal membranes and the placenta are fully described. It is refreshing to see that the embryology is taught from the standpoint of human development. In considering the formation of the human amnion, the author advocates the view of Spee, that the process begins as an inversion of the original blastodermic wall, and when we bear in mind the complicated diagrams that have been adduced from time to time to explain this process, we rejoice that there is confirmatory proof by Selenka in the anthropoid apes, and sincerely hope that so simple and clear a theory may never be disproven. The chapter on the formation of the early placenta is, we believe, the best that has appeared in an English text-book. Very little importance is attached to the part played by the so-called decidual septa in this process. Contrary to the former theories, the author holds that this tissue is fœtal in origin and is developed from trophoblasts which were not utilized in the formation of chorionic villi.

The mechanism of labor is presented in a very clear and painstaking manner, and is illustrated by many new drawings and diagrams. Especial stress is laid upon the importance of abdominal examination, and it is shown that the head at the level of the ischial spines may be palpated by invaginating the perineum. This should limit the field of vaginal examinations to ascertain the condition of the cervix and membranes, and the compressibility of the fœtal head. In the preparation of the hands thorough scrubbing is advised, followed by disinfection by solutions of permanganate of potash, oxalic acid and bichloride of mercury. We are in accord with the suggestion of shaving the patient in operative deliveries, and would go so far as to insist that it be followed by cleansing of the perineum with the solutions advocated for the hands. In view of the acknowledged fact that the external genitals contain pathogenic bacteria, we believe the man is grossly culpable who cleanses his hands by the most approved of methods but fails to devote the same care to the preparation of the perineum. It appears furthermore, that advances in obstetrical technique must be made from the standpoint of the preparation of the patient. Inasmuch as the normal pregnant vagina is not the habitat of pyogenic bacteria, Dr. Williams believes that the routine use of prophylactic douches is more apt to be productive of harm than good. Chloroform is preferred to ether, and its use is commended in all cases during the second stage unless there is especial contra-indication. The author does not favor the use of cocaine in obstetrics and seems to believe in the efficacy of ergot, which of course he would never use until the completion of the third stage. We are somewhat surprised that Dr. Williams has seen no cases upon which he would perform episiotomy. In our experience this is an operation of great value. If properly employed it may prevent, in forceps cases, such lacerations of the vagina as will lead to subsequent relaxation.

The chapter on obstetrical operations is considered immediately after the mechanism of labor. This we believe is its logical position. The application of forceps is recommended as taught by Farabeuf and Varnier, that the first blade be applied to the posterior ear, and its fellow rotated into place, thus giving a grasp in the jugulo-parietal diameters of the head. In high

forceps, however, if the sagittal suture lie transversely, the method as advocated by Budin is endorsed, and the application is made obliquely, thus preventing the possibility that the posterior blade bridge over the anterior concavity of the sacrum and add to the relative contraction of the pelvis. For unreduced occipital posterior presentations, the Scanzoni application is highly commended.

The induction of premature labor in the treatment of contracted pelves finds little support in this work. The author reports 278 cases of contracted pelves in which pregnancy was allowed to come to term, with a fœtal mortality of but 13 per cent, and when we remember that the induction of premature labor carries with it a fœtal mortality of 12 to 45 per cent, the reason for this plan of treatment is apparent. He favors the extension of the relative indication for Cæsarean section to pelves with a conjugata vera of 7.5 to 8.9 cm. and would operate on all cases at term and in good surroundings and condition, if hard second-stage pains for some hours had shown that there was no likelihood of engagement of the head. If, however, the patient and the fœtus were not in good condition and surroundings, he believes it is more conservative to try forceps tentatively, and if no advance occurs, to deliver after craniotomy. This teaching will tend to increase the number of Caesarean sections in hospital practice, a plan of treatment which the author thinks will lessen the fœtal mortality, and keep that of the mother at a minimum. Symphysiotomy is not regarded with favor, and it is stated that this operation is more difficult to perform than Caesarean section and has no advantages over it, consequently it is not suitable for the general practitioner to perform.

Where there are so many chapters of unusual excellence, it must suffice, in passing, merely to call attention to the value of the discussion of Fœtal Syphilis, Deciduoma Malignum and Extra Uterine Pregnancy. The discussion of contracted pelves forms the most complete monograph probably in the English language. The importance of the subject is shown by statistics from the clinic of the Obstetrical Department of the Johns Hopkins Hospital. Every 14th white woman and every 5th colored female had an abnormal pelvis. The classification in the main is that of Tarnier and Budin, and the article is profusely illustrated by many excellent drawings, and diagrams are presented all constructed to a scale, and said to be accurate within 1 mm.

Other chapters which must be regarded as monographs are those upon Eclampsia and Puerperal Infection. All the important theories as to the etiology of the former disease are reviewed, save, perhaps, the very recent one as to the relation of the thyroid secretion and the oxidation of the nitrogenous excreta. In the matter of treatment, it is taught that the uterus should be emptied whenever it can be done in a conservative manner. Prof. Williams seems inclined to bleed all cases which do not show signs of rapid improvement shortly after delivery, even those in which the pulse is thin and weak. This does not entirely commend itself to us, for we believe that the condition of the pulse may contraindicate bleeding. Moreover, it would appear that in certain cases, as in beginning pulmonary œdema, the transfusion following bleeding may be productive of harm. Perhaps mention should have been made of the operation of decorticating the kidney, in the desperate cases of anuria. The author condemns the use of pilocarpine, and states that he has had no personal experience with veratrum viride.

The treatment of puerperal infection is taught as deduced from the study of the bacteriological findings. Thus, he would never use the curette in streptococcus infections, for the reason that the organism has in all likelihood penetrated to the depths of the uterine wall by the time the disease is recognized. If the uterine cavity is not clean, it should be emptied with the finger. The statistics of his clinic show that the streptococcus combined with the colon bacillus has been the most fatal. The douche should only be employed in infections with putrefactive organisms and then saline solution should be used. Statistics are quoted to show that fatal results may follow the use of antiseptic solutions as a intra-uterine douche. The administration of the anti-streptococci serum is not regarded as of much value, nor does the author think that hysterectomy and excision of the pelvic thrombi is an operation likely to lead to the best results.

In general we believe that the book is the best which has yet appeared in English. It has the advantage of being thoroughly scientific and at the same time practical, and in our judgment it is destined to live. There are several errors in proof-reading which we look to see corrected in the next edition, at which time we hope the volume will be better bound. Unusual care has evidently been devoted to the illustrations. They are for the most part original, and while not all objects of art, admirably serve to illustrate a point. The microscopic reproductions are unusually fine.

The author may well be proud of this excellent volume.

The American Year Book of Medicine and Surgery. Being a Yearly Digest of Scientific Progress and Authoritative Opinion in all branches of Medicine and Surgery, etc. Under the general editorial charge of GEORGE M. GOULD, M. D. Surgery. (*Philadelphia, New York, London: W. B. Saunders & Co. 1903.*)

Out of the mass of medical literature, produced in part, it would seem, somewhat from the motive of the man who kept the Directory on his parlor table because it contained his name in print, here is one which will receive a unique welcome from the busy practitioner, the specialist and the student of scientific medicine. A good yearly digest will, if it fall upon busy days, find a demand; and the American Year Book of Surgery is a good yearly digest. It certainly will not suffer by comparison with similar works in other tongues and one cannot but be struck by the consistent excellence of its six hundred odd pages of reviews. Everywhere the essential has received due attention and the unessential has been omitted altogether, with the resultant thoroughness and compactness of a good review. Some degree of discrimination is obvious, too, in the selection of articles for notice; though, in a branch of science so written to the death as medicine the reviewer must of necessity deal with much that is hackneyed if he is to make a book of any dimensions at all. One might suppose, for example that the interest attached to the question of the leukocyte count in appendicitis had been largely destroyed by the continued harangues of those, on one side, who hold that it is of supreme operative value and of those, on the other, who hold that it has no operative value whatever; yet, with important appendiceal problems, like the technic of placing gauze drainage, still receiving scanty attention, this question of the leukocyte count and its brother problem (the "when-shall-we-operate" question) continue to dominate the journalistic field. Text-book articles with nothing of novelty in them, either of content or of style, continue to be written and re-written with the report of a case as an excuse; and, appearing in prominent journals over a prominent name, they must of course be dealt with in a yearly report. Vandeveer and Elting's résumé of actinomycosis and Abbé's "Surgical Complications of Typhoid Fever"—both of them treated at some length in the book before us—are cases in point. The former is little more than a reprint of Rührah's article which was itself only a compilation from the text-books; and for the latter there could be no possible excuse after Keen's classical publication. Here and there Dr. Gould has allowed surgical platitudes to add mass to and subtract quality from an otherwise discriminating review. It is disappointing, for example, to read in the early pages of the book that "boiling renders gloves perfectly sterile;" and, a little later, that "the knife offers the only absolute cure for cancer." We had supposed

the medical school to be the place for teaching the elements of asepsis and for ringing the knell of the arsenic paste treatment of cancer, and we question the wisdom of the usurpation of this function by the leading American surgical year book. If the object of a yearly digest be to disseminate elementary knowledge there can be no doubt about the advisability of giving up nearly two pages of the American Year Book to Senn's perfectly orthodox truisms about cancer; but we doubt very much if a yearly digest should try to do the work of a tract. When this general criticism is made, however, the worst is said; and it is after all an adverse judgment not so much on the discrimination of the reviewers as on the untimeliness of medical literature which gives discrimination little or no chance to function if reviewing is to be done at all. Dr. Gould has given us splendid briefs; that he has had poor cases to deal with is, after all, no fault of his. Of the general condition of surgery for the past year, as reflected in its literature, the American Year Book furnishes an account that is sprightly, thorough and compact.

It would be hoisting Dr. Gould with his own petard to call attention to his spelling; but we cannot fail to notice the somewhat pretentious "appendicectomy" and "diagnosticate," and the pedantic "hypodermatically" which does valiant service here and there but is often replaced by the unassuming "hypodermically"—whether from a shift in the reviewer's orthographical principles or from sheer exhaustion on the part of the typesetter does not appear.

J. C.

The Practical Medicine Series of Year Books. Comprising ten volumes of the year's progress in Medicine and Surgery, issued monthly, under the general editorial charge of GUSTAVUS P. HEAD, M. D., Professor of Laryngology and Rhinology, Chicago Post-Graduate Medical School. Volume I. General Medicine. Edited by FRANK BILLINGS, M. S. M. D., Head of the Medical Department and Dean of the Faculty of Rush Medical College, Chicago, and J. H. SALISBURY, M. D., Professor of Medicine, Chicago Clinical School. October, 1902. Cloth, 8vo, 5×7, pp. 358. (*Chicago: The Year Book Publishers.*)

The little volume before us is the first of the second series of Year Books to be issued under the supervision of Dr. Head. Confined as it is to the subjects of General Medicine, it brings together in short, concise paragraphs the latest facts and theories from writers the world over relating to those large systemic diseases which are now grouped together as belonging to the broad specialty of General Medicine. Here then are to be found treated Diseases of the Respiratory Organs, which include pulmonary tuberculosis, pneumonia, bronchitis, pleurisy, etc.; diseases of the circulatory organs, diseases of the blood and the blood-making organs, general infectious diseases, metabolic diseases embracing gout, diabetes, myxedema; diseases of the ductless glands, diseases of the kidneys, and finally a group of miscellaneous diseases such as osteomalacia, osteitis deformans, caisson disease, etc.

Under the careful scrutiny of Drs. Billings and Salisbury little that was old or trite has been allowed to creep in, so that the book really embodies scarcely anything which has not been put forward as new in the year preceding publication.

To admit for a moment, however, that all that is new is therefore of value would be an admission far from the truth, or from the purpose of the editors, their plan being rather to gather together the most likely theories and the newest facts. To this book then one may profitably turn to learn how during the year the medical mind of the world was looking upon many important problems. Tuberculosis is first taken up and the various ideas and proofs of the relation of bovine to human tuberculosis are considered in a half dozen pages, Adami's conclusions upon the subject being set out in full. This first example illustrates the manner of treatment of the various topics throughout.

It is a pleasure to note that under the heading of therapeutic measures much conservatism has been displayed, only such remedies and modes of treatment being inserted as for the most part would appeal to the thoroughly rational physician. The book is neatly gotten up, is small and light, and one can in a very short time run over all that is here said to be new in the past year upon any given subject, and from the wide range of journals and authors cited it is fair to presume that little of value has escaped these two careful and conscientious editors.

H. B. J.

Tuberculosis: Recast from Lectures delivered at Rush Medical College, in affiliation wtih the University of Chicago. By NORMAN BRIDGE, A. M., M. D., Emeritus Professor of Medicine in Rush Medical College; Member of the Association of American Physicians. Handsome 12mo volume of 302 pages, illustrated. Cloth, $1.50 net. (*Philadelphia, New York, London: W. B. Saunders & Co., 1903.*)

As told in the preface, this little book represents the substance of the lectures on Medical Tuberculosis delivered by the author in the Rush Medical College during the past three years, particular stress being laid upon measures for the protection of the community from the spread of the disease.

The old inadequate way of regarding consumptives and dealing with their diseases was due, in the author's judgment, partly to habit, partly to the gloom with which such invalidism was surrounded. But in this day of better hope for the victims of this appalling disease and a better knowledge of how to prevent it, a new science and a new gospel need to be taught that the profession and the public may be aroused to their duty; and this book is submitted in the hope that it may help, if only in a small way, toward this consummation.

Such purposes are surely commendable and timely, and whatever is written with these motives must contribute to a greater or less extent in carrying forward the great work which now lies before each community, municipality and state.

The book is divided into eighteen short chapters, each embracing some one special feature of the subject. For instance, Chapter I deals with "The Bacillus Tuberculosis," and considers the organism in its various aspects, its history, its morphology, its staining qualities, its chemistry, its growth, its pathogenicity in man and different animals, its fluid products from artificial growth, the tuberculin of Koch.

Succeeding chapters are devoted to The Tuberculous Process, Forms of Tuberculosis, Pathology, Symptoms, Physical Signs, Diagnosis, Prognosis, then an important chapter on Prophylaxis, followed by several upon Treatment, Hygienic, Climatic, Medicinal, and finally a chapter upon the advantages of Sanatorial Treatment over any form of home treatment.

The book is simply, clearly and pleasantly written, full of instruction wholly scientific in character, without attempting to be an exhaustive or an exhausting monograph upon its subject—a book full of good sense which no one will read without profit.

H. B. J.

A Manual of Practical Hygiene. By CHARLES HARRINGTON, M. D., Assistant Professor of Hygiene in the Medical School of Harvard University. Second edition, revised and enlarged. Octavo, 760 pages, illustrated. (*Philadelphia and New York: Lea Brothers & Co., 1902.*)

A great mass of information is presented, of high value for reference. Food, air, soil, water, habitations, sewage, garbage, and disinfectants are treated very fully and very well. Chapters of much interest are devoted to military, naval and marine

hygiene, impressing the reader with the importance of the sanitary lessons to be learned from the various methods followed in the care of large bodies of men under conditions more readily controllable than in civil life. Tropical hygiene, the hygiene of occupations, personal hygiene, the relation of insects to human diseases, preventive inoculations, vital statistics, quarantine and the disposal of the dead finish the list. Physical and chemical methods of analysis abound, although bacteriological methods are but lightly dealt with. Many tables of analytical results from the examination of foods are given, as well as tables of physical data on all sorts of useful subjects, and authorities are freely quoted. No chapter heading, other than that on insects contains the word "disease," and the communicable diseases are treated throughout the book only incidentally. The student, the physician and the health officer, for whom the book was written, will find it very complete in much that they may often wish to know and have little time or opportunity to look up elsewhere. But the main work of the physician and especially of the health officer in practical hygiene as it exists to-day is the suppression of the infectious diseases and the information given on this subject occurs scattered in widely separated paragraphs. Regular public health methods, such as notification, isolation, etc., are discussed only in the most general way, while the pathology, diagnosis and treatment of bad plumbing receive the traditional amplitude of description, notwithstanding the beliefs expressed on the fallacy of attributing any great hygienic importance to the acquired lesions or congenital defects of soil or service pipe.

The section on water contains an excellent discussion of the interpretation of chemical water analyses, and of the relative values of this and of the bacteriological method. We cannot but wish that the interpretation of both forms of analysis as employed to determine the purity of ice had been added, since many misapprehensions exist concerning their usefulness in this field. In the transmission of water samples to a distance for bacteriological analysis ice-packing is advised, as indeed it must be, but in view of the work of Whipple, Jordan and others, it is hardly proper to say that the low temperatures thus secured "have no harmful effect on the vitality" of the bacteria, especially when the diminution of typhoid bacilli in ice demonstrated by Sedgwick and Winslow, Park, etc., is quoted in a preceding section.

The appearance, color, etc., of normal and other waters receive a paragraph, in the section on water, but the appearance of normal milk, in the milk section, is dismissed without description, in spite of the exhaustivenss of this section in other respects. Not everyone knows, by observation or intuition, why milk is white. Tyrotoxicon is quoted (p. 88) on Dr. Vaughan's authority as the exciting cause of milk and cheese poisoning. In view of the scepticism of Vaughan's conclusions on this subject sometimes encountered, we wish that further evidence could have been adduced, and it is worth noting that the recent (1903) edition of Vaughan and Novy states that tyrotoxicon, in cheese poisoning at least, is probably of rare occurrence.

The sterilization of milk is said (p. 92) to require "continuous heating under pressure for about two hours at 248 F." Laboratory experience indicates that the time given is excessive, fifteen minutes at the temperature mentioned being quite sufficient for tubed milk; milk in bulk requiring only so much additional time as shall insure every part of the liquid reaching the desired temperature.

Frankland's hypothesis that normal water is toxic to bacteria, set forth to explain the greater development of bacteria in boiled than in untreated water (p. 334), should, we think, be accompanied by the alternative and equally logical hypothesis, that boiling merely modifies favorably the otherwise "raw," and so less assimilable materials which serve as bacterial food.

Amongst minor irregularities inseparable from so large a book are the obsolete use of micrococcus for bacillus in the specific name of *B. prodigiosus* (p. 295), and the statement (p. 304) that *anthrax* spores were sought for in attempts to trace the source of tetanus infection from blank-cartridge and other fireworks wounds.

The triviality of some of the above criticisms is itself evidence for the general accuracy of the book. Perhaps the most interesting general topic suggested by its perusal is the question of the limitations of practical hygiene. Taking the author's work as a basis for the inductive determination of the question, we should be forced to believe that hygiene, practical or otherwise, includes the physics, chemistry and biology of the immediate environment of man. This is surely a wide field, and few can ever hope to know personally and in detail more than a very small portion of it. Hygienists should feel grateful to Dr. Harrington for accumulating and presenting, clearly and carefully, so much of the best available information on these subjects.

HIBBERT WINSLOW HILL.

Hygiene and Public Health. By LOUIS PARKES, M. D., D. P. H., and HENRY KENWOOD, M. B., D. P. H., F. G. S., the former late, and the latter present, Assistant Professor of Public Health at University College, London. Second edition, 763 pages, illustrated. (*Philadelphia: P. Blakiston's Son & Co., 1902.*)

This is a recast of a book of identical title by the first mentioned of the joint authors. It aims to give, in a condensed form, the essentials of hygiene and public health administration, for the use, particularly, of those preparing for the diploma of public health.

The second edition was called for within a year of the issue of the first, and has been favorably reviewed in England. We should be sorry nevertheless to think that this book correctly represents the best English teaching of the day in hygiene. The section on the Contagia and Communicable Diseases is very good, vaccination in particular receiving excellent treatment. The section describing the hygiene of habitations, and those on personal hygiene present little to criticise. Preservatives in milk are discussed with judgment and the logical basis of the investigation of epidemics in practice is well set forth. Disinfection is considered rather conventionally, except for the statement that a pint of phenol can be vaporized by placing in it "a small rod" made red hot! Such a phenomenon could of course only come to pass "under a suspension of the rules" relating to latent heat and the conservation of energy.

Serious defects are to be found in the section on Water. This begins, in the traditional way, with the Roman aqueducts, discusses diffusely the general subject of water supply, and ends with the interpretation of chemical water analyses for sanitary purposes. Much which is given is valuable, but all is vitiated by the false principles on which the author's teaching is based. These principles become evident in the remarkable statement (page 77) that "Organic matters" (in water) "derived from an animal source are dangerous as well as disgusting." It would be difficult to construct a more concise denial of all the canons of modern water hygiene than this.

Under Refuse Disposal, the same false principles are shown in the reference (p. 100) to ". . . the risk of spreading disease by the fermentation of the liquid filth" (of middens, closets, &c.). Follicular tonsillitis and "diphtheritic throats" are listed (p. 156), with other troubles, as induced, directly or indirectly, by sewer and drain gases.

Evidently the authors have not escaped from the thralldom of the filth theory of disease. That they feel some reserve toward the "germ theory" is made plain by their undecided dalliance with the latter, most evident in the opening pages of the section of Contagia, the body of which, written by another hand, shows firm construction and some familiarity with the later developments of bacteriology. The bacteriological lore of the earlier

chapters is well illustrated by the following: "The microbes in sewer air are chiefly moulds, whilst those in sewage belong to the class of bacilli" (p. 223). *Bacterium termo* is described (p. 438) as a definite species, prominent in putrefactive changes.

Of minor defects there are not a few. Lack of coordination is evinced in the occurrence of two mutually exclusive statements on a rather important subject, thus; the health of towns (p. 80) is said to depend largely on the efficient removal of refuse; later on (p. 259) the health of towns is said to depend largely on sunlight and fresh air.

Much attention is given to the details of plumbing work, no longer considered by the best thinkers in sanitary matters as of any great hygienic importance. This following of a time-honored custom may perhaps be the more readily pardoned in view of the large number of fellows-in-error who might be quoted by the defence.

While we cannot feel justified in judging, at this distance, of the value of this book to prospective health officers in England, we believe that, of American students, only those who wish to review some of the transitional vagaries through which the principles of modern hygiene have now more or less successfully threaded their way will profit by its perusal.

HIBBERT WINSLOW HILL.

A System of Physiologic Therapeutics, Vol. V. Edited by SOLOMON SOLIS COHEN, A. M., M. D., Senior Assistant Professor of Clinical Medicine in Jefferson Medical College. In three parts.

Part I.—Prophylaxis. By JOSEPH MCFARLAND, M. D., Professor of Pathology and Bacteriology in the Medico-Chirurgical College, Philadelphia, and W. WAYNE BABCOCK, M. D., Lecturer on the same subject in the same College. 319 pages.

Part II.—Civic Hygiene. By HENRY LEFFMAN, M. D., Professor of Chemistry and Toxicology in the Women's Medical College of Pennsylvania. 43 pages.

Part III.—Domestic and Personal Hygiene; Nursing and Care of the Sick-Room. By ALBERT ABRAMS, A. M., M. D. (Heidelberg), Consulting Physician to the Mount Zion Hospital and the French Hospital, San Francisco. 145 pages. First edition, octavo, illustrated. (*Philadelphia: P. Blakiston's Son & Co., 1903.*)

The editor describes this book as an Introduction to the Science of Medicine. The name fits. Freshmen may read it—with a dictionary—much to their subsequent profit. The fourth year man may use it to concentrate and arrange in due perspective his accumulated facts. The "busy practitioner" will find in it a concise epitome of modern etiology, bringing him well up to date in subjects likely to be neglected in the pursuit of therapeutics. The hygienist, weary alike of platitudes and laboratory technicalities, will rejoice and take courage to see a rational, connected, terse account of the real meat of his own work.

These comments apply to each of the three parts. The style of all is very similar. No words are wasted in setting forth the teaching of the writers. Not as the scribes and pharisees, but with masterful dogmatism, they teach the best canons of the day, usually without attempt at references. To enjoy the book, one must have confidence in the writers themselves, but this is true of all writings, and no amount of quotation from authorities can make up for its absence.

The section on disinfectants (Part I) is particularly good, its introductory pages furnishing the best and most logical exposition of the outlines of the subject known to the reviewer.

Nuisances (Part II) are treated with quite unusual simplicity and good sense, leaving one a regret only for the extreme brevity of the section.

Personal hygiene (Part III) presents well-balanced, and thoroughly sane directions for the care of the body.

Beyond these sections, it is difficult to select passages notably excellent, because the average is so high throughout.

The book is one of general principles. Methods are dealt with therefore superficially or not at all. Sometimes an illustration is made to do duty alone. This is unsatisfactory to the inquiring mind. An illustration always needs some text.

Pet beliefs are so constantly upset in these days that the reader cannot but wish the statement (p. 21) "hydrophobia is *said to be* prevented" (reviewer's italics) by the Pasteur treatment, had been elaborated, since as it stands it suggests uncertainty both *pro* and *con*, as does a similar statement later on.

Under snake venoms (p. 117) attention is not clearly drawn to the distinction between local and general effects in considering the treatment of snake-bites with anti-venene, which latter is spoken of as a "perfect antidote" (p. 119). Anti-venene, we believe, is antidotal to that constituent of snake venom which acts upon the central nervous system but not to that which acts on the tissues at the site of the bite.

In discussing the modes of transmission of diseases (p. 130), there are cited as conveyers of disease first, the well but infected animal; second, the sick animal transmitting a disease similar to its own; third, the sick animal transmitting a disease differing from its own because the parasite transmitted undergoes a different phase of development in the new host (tapeworm and cysticercus, for instance). The writer is evidently treating "disease" here as a clinico-anatomical entity. Should not then a fourth class be added, to cover such cases as the derivation of gonorrheal ophthalmia from gonorrheal urethritis, where the parasite is the same in both hosts, the diseases quite different? Such cases do not fall properly under any one of the three heads given.

The illustrations, sometimes excellent, as those of the malarial parasites, do not as a rule come up to the standard of the text. This is especially true of the bacterial plates, those of *B. diphtheriæ*, *B. tuberculosis* and *B. pestis* being really atrocious. In sympathy with the famous Athenian who was tired of hearing Aristides called "The Just," we welcome the reproduction of other than Dr. Howard's excellent mosquito plates, although those of Dr. George Beyer are somewhat less clean-cut.

The typography is clear and good, but the selection of fonts does not "preserve the unities" very successfully, and the putting of catchwords in heavy-faced type, while convenient and impressive, spoils the look of the pages. The margins are rather scrimpy. So good a text deserves a better setting.

A second edition will doubtless show expansion on the subjects of immunity, paratyphoid fever, summer diarrhea, the etiology of small-pox and the disposal of sewage. We even live in hope that American data on the disposal of garbage may some day be accumulated in quantity and quality worth the quoting. Chiefly an economic problem, garbage disposal is also hygienic in the broadest use of the latter term, yet only one attempt, we believe, has as yet been made in this country to do careful comparative experimental work on its many problems.

It is superfluous to add that we consider this one of the best American books on its subject, admirably adapted to the needs of the times, and thoroughly up to date.

HIBBERT WINSLOW HILL.

Practical Points in Nursing. For Nurses in Private Practice. With an Appendix containing Rules for Feeding the Sick; Recipes for Invalid Food and Beverages; Weights and Measures; Dose List; and a full Glossary of Medical Terms and Nursing Treatment. By EMILY A. M. STONEY, late Superintendent of the Training School for Nurses, Carney Hospital, South Boston, Mass. Third edition, thoroughly revised. Handsome 12mo of 458 pages, fully illustrated, including 8

colored and half-tone plates. Cloth, $1.75 net. (*Philadelphia, New York, London: W. B. Saunders & Co., 1903.*)

This book is well named, in that it gives the practical information which a nurse ought to possess when she leaves a hospital and enters a family to begin her career. A notice was given in the BULLETIN of an earlier edition. The present edition, owing to the lamented death of the author, has been revised and augmented by a physician who has added such material as seemed desirable to bring the book fully up to the present state of knowledge. The directions which are given for packs, baths, fumigations and various surgical procedures are clear and in many instances they are supplemented by excellent illustrations. The section on germicides and disinfection is also very complete.

We must take exception to the suggestion that a nurse can decide whether a baby is *tongued-tied* and is competent to operate upon the child.

The volume is attractively printed and helpfully illustrated and deserves a wide sale.

Medical Jurisprudence, Insanity, and Toxicology. By HENRY C. CHAPMAN, M. D., Professor of Institutes of Medicine and Medical Jurisprudence in the Jefferson Medical College, Philadelphia. Third edition, thoroughly revised, greatly enlarged, and entirely reset. Handsome 12mo volume of 329 pages, fully illustrated, including four colored plates. Cloth, $1.75 net. (*Philadelphia, New York, London: W. B. Saunders & Co., 1903.*)

This work is based on the author's practical experience as Coroner's Physician of the city of Philadelphia for a period of six years. It is concise and specific in statement and is a manual rather than a storehouse of facts and cases. The work is divided into three parts of rather unequal merit. That on Medical Jurisprudence is undoubtedly the most valuable, as might be expected from the author's special training as coroner's physician. The section on Insanity has little merit and might as well be omitted from future editions. The section on Toxicology, although too much abridged, is much more useful. The book has a certain merit in the fact that it gives a brief outline of the important subjects treated and can be commended as a guide to those who are indisposed to search further.

Medical Microscopy: Designed for students in laboratory work and for practitioners. By T. E. OERTEL, Professor of Histology, Pathology, Bacteriology and Clinical Microscopy, Medical Department, University of Georgia. (*Philadelphia: P. Blakiston's Son & Co.*)

In looking through this book one is quite at a loss to know what its exact purpose was meant to be. Its title is most emphatically a misnomer; medical microscopy forms the minor part of its actual subject-matter. It is devoted rather to a brief outline of bacteriological methods and cultural characteristics of bacteria, and to the preparation and examination of pathological tissues, to which is appended a scanty, insufficient and inaccurate consideration of the microscopy of the blood, urine, sputum, fæces, etc. Of the 350 pages of the book, the first 230 are given up to the bacteriological and pathological portion; the following 120 pages contain the more directly clinical subjects—blood, urine, sputum, fæces. With the latter group of subjects has been fused a mass of clinical data and descriptions of macroscopic appearances, which makes the presentation far from clear, and frequently confused. The subject of sputum and fæces, the importance of which is being more and more appreciated, has been plainly neglected and receives the scantiest possible consideration. The descriptions of apparatus and of technique are, in the main, good. The illustrations have been well reproduced. It is difficult to see, however, why reproductions of apparatus should uniformly, or almost so, contain in a conspicuous position the name of the manufacturer. One is led to make conjectures as to their possible value.

The subdivision of subjects by headings and sub-headings has been done with unusual carelessness, and made unusually misleading. Unimportant headings are printed in prominent type, and some important and quite distinct subjects have been classed under headings to which they obviously do not belong. Thus, hydatid cysts and ovarian cysts are apparently paragraphed under the subject of fæces, and follow immediately the paragraph on Amœba coli. Infusoria are considered with "Vermes in the Urine." W. B.

Clinical Treatises on the Pathology and Therapy of Disorders of Metabolism and Nutrition. By PROF. DR. CARL VON NOORDEN, Senior Physician to the City Hospital in Frankfurt a. M. Part I. Obesity: Indications for Reduction Cures. Authorized American edition. Translated under the direction of BOARDMAN REED, M. D., by DR. ALFRED C. CROFTAN. (*New York: E. B. Treat & Co., 1903.*)

The introduction is devoted to a plea for rational therapeutics. "Each case presents is own needs," and "the physician who invariably prescribes the diet given by Dr. X. or treats his patients according to Dr. Y.'s method can only attribute it to luck if he escapes committing serious error."

The first chapter of the monograph discussing "Simple Obesity in Otherwise Healthy Subjects," does not prove very satisfactory. Although certain general principles are laid down, they are subsequently so modified and curtailed that few, if any, cases seem to furnish the indications for reduction. The rule is given that *advanced degrees* of obesity present the indications for reduction cures when there is interference with the health of the patient. But the author immediately excludes young persons from the list and insists that in them you should be content to prevent further progress of obesity; while reduction cures in old age are always to be avoided since they accelerate decay. This would seem to leave to the middle-aged alone the right to indulge in reduction cures. Yet not so, since even in them all measures aiming at reduction are counter-indicated if they have been obese for several decades.

Medium degrees of obesity are not discussed with more certainty, and *slight degrees* furnish no indication for reduction other than vanity. Still, this is considered good and sufficient ground for treatment, inasmuch as refusal from a physician would merely drive his client into the hands of some quack.

The second chapter deals with "Obesity Complicating Other Diseases," and contains much of value. In all those cases where increased work is already thrown on the heart, as in valvular disease, arterio-sclerosis, emphysema, etc., the deleterious effects of excessive fat are of such importance that reduction becomes one of the most essential features of their therapy. This is best accomplished by the intermittent cures. These consist in allowing about one month to intervene between the periods in which the patient is kept under strict regime. The only renal disorder that is of importance in this connection is the contracted kidney. Since prognosis here depends on the functional power of the heart the same rules apply as in circulatory diseases.

Among the other conditions mentioned, the most important is gout. Von Noorden considers this to be favored with a good prognosis in the fat and only advises reduction in cases where there is large destruction of articular tissue or where some lesion is associated which renders obesity dangerous. Likewise, in diabetes mellitus "cures" are out of place, for fat here is usually a protection against the serious dangers of the malady.

Finally it is pointed out that forced feeding in pulmonary tuberculosis is not an unmixed good if carried far enough to allow the patient to become obese. Excessive fat leaves no room for

healthy development of muscle, which would guarantee a far better outlook.

As a whole the monograph is somewhat disappointing, coming from such an authority on pathological metabolism, for it fails to give the definite advice that is welcome to the clinician. In some parts, however, as where circulatory disorders are discussed, the statements are clearly and concisely made, are evidently the result of wide observation and will repay very well those who give them heed.

Clinical Treatises on the Pathology and Therapy of Disorders of Metabolism and Nutrition. By PROF. DR. CARL VON NOORDEN. Authorized American edition, translated under the direction of BOARDMAN REED, M. D., Philadelphia. Part II. Nephritis. (*New York: E. B. Treat & Co., 1903.*)

The monograph is based on the clinical observations of the author as well as on the studies in metabolism which have been pursued by him and his pupils through a number of years. Such investigations must supply the foundation for any rational therapy in nephritis. The various end products of metabolism have been studied and are described as fully as could be expected in such a volume, with reference to their derivation, toxicity, ease of elimination and quantity normally excreted. Applications of these facts to the treatment of nephritis take up the last two chapters of the book.

The customary routine in the management of nephritis of all types is assailed with some violence. Drugs are assigned a very limited sphere. Radical changes in the diet are recommended. These look toward the least possible allowance of nourishment in acute nephritis, while in the chronic type the author favors much greater latitude than is usually permitted. Among other innovations is the addition of dark meat to the diet in this condition.

The use of milk, so time-honored in all varieties of nephritis, is greatly curtailed. Its relatively high albumin content ultimately throws into the circulation large quantities of urea, which has been found very difficult of elimination. The trouble is met at least in part by the use of a super-fatted milk. This furnishes a much more nutritive mixture than plain milk without any increase in the proteid. Another unfavorable quality of milk is due to its large proportion of phosphoric acid. In order to avoid the deleterious effect of this on the kidney, the addition of calcium carbonate is suggested, which will minimize the absorption of phosphates from the gastro-intestinal tract.

Von Noorden reaches the acme of iconoclasm in urging very strongly the limitation of water for nephritic patients. He holds that under some circumstances the kidneys find nothing harder to eliminate than water and that it always throws unnecessary work on these organs when given in quantities indiscriminately large. The stand he takes is certainly extreme and largely opposed to clinical experience. Cases are not uncommon in which the ingestion of fluids, in amounts that he calls excessive, is followed by free diuresis and with it an amelioration or disappearance of toxic symptoms.

Boldness is one of the chief characteristics of the monograph and at times its assertions are so far from the present-day teaching and practice that they are sure not to meet with immediate acceptance. Yet, wherever the author's views fail to secure endorsement, they will command respect and stimulate investigation.

The volume seems to us one of considerable significance, and it is to be deeply deplored that the work of the editor and printer has been very poorly done. From the incorrectly spelled name of the author on the cover to the last chapter in which the pages are almost hopelessly mixed with those of the preceding chapter, the book abounds in errors, not found in the original.

Diseases of the Heart and Arterial System. By ROBERT H. BABCOCK, A. M., M. D., Professor of Clinical Medicine and Diseases of the Chest, College of Physicians and Surgeons, Chicago. With three colored plates and one hundred and thirty-nine illustrations. (*New York and London: D. Appleton & Co., 1903.*)

This work is abreast in modern and recent ideas, moulding the thoughts of the masters with the skilled hand of experience, adding freely from keen personal observation.

Anatomy and physiology have been but briefly touched upon; space is rather reserved for a concise and well arranged expositions of conditions of disease.

The prognosis and treatment of valvular heart disease are given relatively much space and the subject is handled in a very detailed and painstaking manner. These chapters alone will commend the work to that large body in the profession who practice general medicine, who represent the average worker rather than the teacher, and to whom heart cases, though not frequent, as in hospital practice, are a source of careful study and never-ceasing anxiety.

Dr. Babcock values the Nauheim home treatment in private practice, fully satisfied that he has obtained definite results in reduction of area of cardiac dullness, and in favorable cases of mitral stenosis of the second degree (Broadbent) he has restored the second apex sound by baths and resistance exercises, and obtained great general improvement.

The ideas of the author on acute endocarditis are made to correspond to present pathology, recognizing both simple and ulcerative forms as usually of bacterial origin; malignancy depending upon the virulence of the infecting organism.

The importance of the mildest rheumatic, choreic or tonsilar attacks receives sufficient attention as common causes of endocarditis.

A few pages are granted the rare but interesting subject of pedunculated and ball thrombi of the heart, brought to notice by Welch in his article in Allbutt's system.

One is impressed as he advances through this valuable book that the author has endeavored to sacrifice nothing of the scientific, though writing for the bedside workers in the profession and that diagnosis and treatment have been foremost in his mind.

The Surgical Treatment of Gastric and Duodenal Ulcers. By B. G. A. MOYNIHAN, M. S. (London), F. R. C. S. Eng., Senior Assistant Surgeon, Leeds General Infirmary. Illustrated. (*Philadelphia, New York, London: W. B. Saunders & Co., 1903*).

This is an unusually attractive little volume as regards binding, paper and print. Its text is practically identical with that of the paper by the same author entitled "The Surgery of the Simple Diseases of the Stomach," read at the recent meeting of the American Surgical Association, to which is added a minute tabulation of the cases upon which he has operated.

The author confines himself to a discussion of his own experience with such ulcers, dealing with the subject under the following headings: (1) Perforation of Gastric or Duodenal Ulcers. (2) Hæmorrhage. (3) Chronic Ulcer. (4) Hour-glass Stomach.

He is an ardent advocate of gastro-enterostomy, rather than pyloroplasty or excision of the ulcer, in the treatment of gastric ulcers and hæmorrhages arising from them. His results seem to justify this, for practically all of his cases had an uninterrupted convalescence.

It is to be regretted that a brief summary of his cases, with deductions therefrom, was not substituted for the extensive tables at the back of the book.

The Practical Medicine Series of Year Books, comprising ten volumes on the Year's Progress in Medicine and Surgery. Under the general editorial charge of GUSTAVUS P. HEAD, M. D., Professor of Laryngology and Rhinology, Chicago Post-Graduate Medical School. Volume V. Obstetrics. Edited by REUBEN PETERSON, A. B., M. D., Professor of Obstetrics and Gynecology, University of Michigan. (*Chicago: The Year Book Publishers, 1903.*)

This work "purposes placing at the command of the general practitioner the subject-matter covering advances made in this department during the past year, and in such a form as to aid him in practical work."

The subject-matter consists of abstracts of articles that have appeared in the best French and German journals and in English and American journals of more or less prominence. These are arranged without comment often, and with total disregard for their relative importance.

Certain sections, notably those dealing with the placenta, extra-uterine pregnancy, and obstetrical operations, contain much that may be of interest, but little that will be of practical value. It is unfortunate that the series of articles dealing with the Bossi dilator gives but one view of the German obstetricians, whose enthusiastic approval of this dangerous instrument has not been shared by any of the best French, English or American obstetricians.

There is little or nothing on that most important subject Hæmorrhage, while the section on Infections is devoted largely to discussion of treatment and contains much that is neither new nor progressive.

Of the illustrations, the best that can be said is that they are few in number.

The Practical Medicine Series of Year Books. Volume IV. Gynecology. Edited by EMILIUS C. DUDLEY, A. M., M. D., Professor of Gynecology, Northwestern University Medical School, and WILLIAM HEALY, A. B., M. D., Instructor in Gynecology, Northwestern University Medical School. (*Chicago: The Year Book Publishers, 1903.*)

The above named volume constitutes Volume IV of the Practical Medical Series of Year Books for the current year. The editors, Emilius C. Dudley and Wm. Healy, state in its introduction that they have endeavored to review the best practical literature of gynecology for the year beginning February 1, 1902. In addition to the abstracts Dr. Dudley has added in many places editorial comments. These are very instructive and it is to be regretted that they are not more frequent. The book as a whole accomplishes its purpose, which, as expressly stated, is to furnish a busy practitioner, and presumably the one with limited time for reading, with the current literature. There has been no attempt to make a complete year-book and it is plainly stated that such anatomical and pathological contributions as have been made are outside the scope of this book. In the main the selection of articles has been excellent and the abstracts themselves have been well made.

In looking through the literature one finds, as might be expected in such a book, that many articles have been left out. For example, extra-uterine pregnancy is not considered. A number of articles on this subject appeared during the year and to completely ignore them seems a real omission. In the opinion of the reviewer the treatment of carcinoma of the cervix is also insufficient. A more complete consideration of the proceedings of the International Congress at Rome in reference to this subject should have found place. The reports made there by the advocates of the radical abdominal operation are exceedingly suggestive and interesting. A number of other good papers have not been reviewed, but the above-mentioned seem the most important omissions.

The volume has been printed and bound to conform with the other volumes of the series. It contains 237 pages. Considered from the standpoint from which it was written, it can be thoroughly recommended as a useful book.

The Practical Medicine Series of Year Books. Volume II. General Surgery. Edited by JOHN B. MURPHY, M. D., Professor of Surgery, Northwestern University Medical School. (*Chicago: The Year Book Publishers, 1902.*)

This book of 520 pages is one of a series of ten volumes constituting the Practical Medicine Series of Year Books which were issued monthly under the general editorial supervision of Gustavus P. Head, Professor of Laryngology and Rhinology in the Chicago Post-Graduate Medical School. It reviews fully the more practical articles relating to surgery which appeared during the year preceding its publication in November, 190

Dr. Murphy has abstracted and classified over five hundred papers. Considerable space has been given to gall-bladder, gastro-intestinal, appendix and kidney surgery. There are no references to surgical pathology. Purely theoretical and experimental studies have not been reviewed. Only an occasionally parenthetical editorial opinion has been proffered.

To medical men who desire a summary working knowledge of the literature of practical surgery the book will be useful.

Surgical Diseases of the Kidney and Ureter, including Malformations and Misplacements. By HENRY MORRIS, M. A., M. B. London, F. R. C. S., etc. In two volumes, containing together 1352 pages, with two colored plates and upwards of two hundred engravings. (*London, Paris, New York, Melbourne: Cassell & Co., Limited; Chicago: W. T. Keener & Co. 1903.*)

This work is in no sense fragmentary like a series of monographs, but rather a systematic treatise. It represents the best that is known concerning its subject-matter. The writer has not only presented to the medical profession the results of his extensive experience in the surgery of the kidney and ureter, but has also combined with it an exhaustive study of the writings of others. The volumes are well arranged and, what is of great importance in a work of reference, they have a good index. One can only regret the more that in a work otherwise so complete a bibliography should be lacking.

Part I, treating of surgical diseases of the kidney, occupies three-fourths of the two volumes. It is impossible to review each of the several chapters, and we must content ourselves with the statement that the entire subject is systematically, carefully and adequately treated.

Part II is devoted to surgical diseases of the ureter, and here one finds a similar thorough treatment of the subject as in Part I. In this connection it is of interest to note the author's objections to ureteral catheterization as stated on pp. 324-329, Vol. II, which are thus summarized:

1. The obnoxious nature of the operation in the female and the extreme difficulty of it in the male.
2. The unreliableness of the information it affords.
3. The risks to which it exposes the patient.
4. The disadvantages of it as a mode of treatment.

Under the first objection he speaks of the positions in which women are placed as "very revolting to the finer feminine sense," unless the patient is under an anæsthetic, which hardly seems a valid objection to a most important and valuable means of investigating the condition of the ureters and kidneys. New methods and greater manual dexterity in the operation, the result of practice, have done much to remove this objection, and we cannot avoid suggesting as a possible reason for it on the part of the author a lack of personal experience with the details of

ureteral catheterization. The allegation that the information afforded by catheterization is unreliable is supported by cases where a nephro-ureterectomy had been done because a diagnosis of tuberculosis of the ureter and kidney had been made by the cystoscope and ureteral catheter. After the removal of the kidney and ureter it was found upon a careful study of the specimen that the tuberculous process had been limited to the kidney and that the ureter was not involved in disease. Granting the utmost weight to this objection, in this connection it has little practical value, because the ureter is certainly a useless organ without a kidney attached to it. Even if it had been a grave error on the part of the surgeon and one which might have been followed by a more serious consequence, the possibility of such an error does not constitute a valid argument against the operation itself in skilful hands. We should not think of discarding the use of the microscope because a physician may make the diagnosis of cancer of the uterus from curettings which the after-removal and examination of the uterus may have shown to be erroneous.

Nor is the danger to which a patient may be exposed by reason of such catheterization as serious an objection as the author believes. Under proper care the risk to the patient is very slight and not to be thought of when its great value as a means of diagnosis is considered. It should certainly not be condemned absolutely as a mode of treatment because it may have been employed in unsuitable cases. We quite agree with the author that the reimplantation of a ureter in the bladder in cases where the stricture is situated at or near the bladder is preferable to attempting to dilate the stricture by ureteral catheters and also that a pyo-nephritic kidney containing calculi or filled with "masses of pus and old partially disorganized blood clot" cannot be cured by irrigating the kidney *through a ureteral catheter*.

While, therefore, we may not agree with the author in some of his conclusions, we cannot omit to express our appreciation of the completeness and thoroughness of the book. It is unquestionably the most satisfactory treatise on this important branch of surgery in the English language. It deserves to be widely known and read.

The Care of the Baby: A Manual for Mothers and Nurses. By J. P. CROZER GRIFFITH, M. D. Third edition, thoroughly revised. (*Philadelphia, New York, London: W. B. Saunders & Co., 1903.*)

There could be no more substantial appreciation of Dr. Griffith's book than the need for a third edition. He has given a comprehensive treatment of matters that pertain to the mother's care of the baby in a style at once clear and concise, well adapted to the popular reader. The volume is genuinely good throughout and merits the prominent place it holds among books of its class.

Very few changes have been made in this edition. Indeed, few were needed. Here and there a sentence or two has been inserted to amplify or modify the text of the former edition, but no radical departure occurs. The most noteworthy addition is in the chapter on the sick baby, which has been extended to include a discussion of the following conditions: Bow Legs, Influenza, Heart Disease, Scurvy, Lip-sucking, Dirt-eating, and Round Shoulders.

The teaching of the book is not open to criticism save in a few places. We feel the umbilical cord is best kept from danger of infection through the use of a dry dressing and never by means of "washing of the navel" with "water dropped upon it from cotton." The advisability of placing a thermometer in the hands of an anxious mother with instruction to take the baby's temperature often is questionable. The instrument is sure to give rise frequently to unnecessary discomfort both to mother and to child, and in all probability would never give evidence of sickness before the appearance of symptoms attracting the mother's notice.

The book abounds in information of the greatest practical value to the young mother, and should be brought to her attention by the physician. It is a clear exposition of the knowledge that comes from large personal experience and will go far to counteract the ignorance, neglect and bad management accountable for many of the derangements of infancy.

Modern Materia Medica and Therapeutics. By A. A. STEVENS, A. M., M. D., Lecturer on Physical Diagnosis in the University of Pennsylvania; Physician to the Episcopal Hospital and to St. Agnes' Hospital; Fellow of the College of Physicians of Philadelphia, etc. Third edition, entirely re-written, pp. 663. (*Philadelphia, New York, London: W. B. Saunders & Co., 1903.*)

The first 460 pages deal with Materia Medica proper, the drugs being arranged and discussed according to their physiological action. The remaining 150 pages are devoted to remedial measures other than drugs and to applied Therapeutics. The author has presented a very acceptable book on the subject.

A Text-Book of Legal Medicine and Toxicology. Edited by FREDERICK PETERSON, M. D., President of the New York State Commission in Lunacy; Chief of Clinic, Department of Nervous Diseases, Columbia University; General Consultant to the Craig Colony for Epileptics, Sonyea, New York, and WALTER S. HAINES, M. D., Professor of Chemistry, Pharmacy and Toxicology in the University of Chicago. In two volumes. Volume I, p. 730. (*Philadelphia, New York, London: W. B. Saunders & Co., 1903.*)

The appearance of this excellent book is indeed opportune, as there is a demand for a comprehensive book of about this size and bringing the subject-matter up to date.

The contributors have produced a work of interest and value written in a clear, readable style.

The work includes two chapters which are rather unique—one on "The Destruction and Attempted Destruction of the Human Body by Fire and Chemicals," and the other on "The Medico-Legal Aspects of the X-Rays." This latter will appear in Vol. II.

Throughout the work many of the most interesting recent cases are cited, and the book will be a great aid to both the medico-legal expert and the advocate.

A Handbook of Materia Medica, Pharmacy and Therapeutics, including the Physiological Action of Drugs, the special Therapeutics of Disease, Official and Practical Pharmacy, and Minute Directions for Prescription Writing. By SAM'L O. L. POTTER, A. M., M. D., M. R. C. P., London. Ninth edition revised and enlarged, pp. 951. (*Philadelphia: P. Blakiston's Son & Co., 1902.*)

The general character of this book is the same as that of the previous editions, but much has been rewritten and much new matter added. The fact that the book has passed through nine editions since 1886 would indicate that it has a place and has been well received. As a treatise on Pharmacology it is not at all comprehensive. Such questions as the fate of drugs in the body are not discussed and numerous facts of theoretical and biological interest are omitted. Hence it can in no sense replace our text-books of Pharmacology proper. On the other hand it contains a very great deal of valuable material expressed in a very clear phraseology and in most convenient form for ready reference. It will, therefore, be a valuable addition to the library, especially of the medical student.

Anatomy of the Brain and Spinal Cord. With Special Reference to the Grouping and Chaining of Neurones into Conduction Paths. By HARRIS E. SANTEE, M. D., Ph. D., Chicago. Third edition. (*Chicago: E. H. Colegrove, 1903.*)

The work is designed to serve as a text-book for medical students and at the same time to be of use to practitioners. It is written in good style, is readable, and lacks the usual dullness of works on anatomy. It is brief and clear, though not always accurate. The special feature of the book is the attempt to make the main divisions of the brain, as for example the mid-brain, or the medulla, stand out by means of the form and the functions of the tracts they contain. The references to function are a distinct addition. The descriptions are graphic, as for example, the form of the internal capsule as a funnel opening outward; nevertheless it is difficult to get a complete picture of the long tracts when described in so many segments. This is especially true of the sensory tract. Any attempt to give the student a picture of the tracts of the central nervous system as a unit, rather than as an area in a microscopic section, is an advantage, but to describe so complex a structure as the brain without illustrations is an exceedingly difficult task. The new nomenclature is not used in the text, but is introduced in footnotes. By placing the embryology at the end the development of the brain is not made an integral part of the general treatment of the subject, a decided disadvantage from the point of view of teaching.

BOOKS RECEIVED.

Surgical Diseases of the Kidney and Ureter. Including Injuries, Malformations and Misplacements. By Henry Morris, M. A., M. D., Lond., F. R. C. S. With two colored plates and upwards of two hundred engravings. In two volumes. 8vo. 1901. Cassell and Company, Limited, London, Paris, New York and Melbourne.

Clinical Treatises on the Pathology and Therapy of Disorders of Metabolism and Nutrition. By Prof. Dr. Carl von Noorden. Authorized American edition, translated under the direction of Boardman Reed, M. D. Part I. *Obesity*, the Indications for Reduction Cures. 1903. 8vo. 59 pages. E. B. Treat & Co., New York.

Clinical Treatises on the Pathology and Therapy of Disorders of Metabolism and Nutrition. By Prof. Dr. Carl von Noorden. Authorized American edition, translated under the direction of Boardman Reed, M. D. Part II. *Nephritis.* 1903. 8vo. 112 pages. E. B. Treat & Co., New York.

Saint Bartholomew's Hospital Reports. Edited by Norman Moore, M. D., and D'Arcy Power, F. R. C. S. Vol. XXXVIII, 1902. 8vo. XXXVI + 258 + 206 pages. 1903. Smith, Elder & Co., London.

Diseases of the Skin. Their Description, Pathology, Diagnosis and Treatment, with Special Reference to the Skin Eruptions of Children, and an Analysis of Fifteen Thousand Cases of Skin Disease. By H. Radcliffe Crocker, M. D. (Lond.), F. R. C. P. Third edition, revised and enlarged. With four plates and one hundred and twelve illustrations. 1903. 8vo. 1446 pages. P. Blakiston's Son & Co., Philadelphia.

The American Year-Book of Medicine and Surgery. Collected and arranged with critical editorial comments by J. M. Baldy, M. D., J. Chalmers Da Costa, M. D., *et al.* Under the general editorial charge of George M. Gould, M. D. Vol. II. Surgery. 1903. 8vo. 671 pages. W. B. Saunders & Co., Philadelphia, New York, London.

The Internal Secretions and the Principles of Medicine. By Charles E. de M. Sajous, M. D. Volume First. With forty-two illustrations. 1903. 8vo. 800 pages. F. A. Davis Company, Philadelphia.

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